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Development of technological capabilities in an extremely volatile economy. The industrial sector in Argentina

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Abstract

The goal of this paper is to analyse the main characteristics of Argentine manufacturing industry and the development phases (going back more than a century), especially, to concentrate on its structural features during the 1980s and on the changes that have occurred since the Convertibility Plan was introduced – between 1991 and 2001 –, the most recent transformations between 2002 and 2006 and, finally, in the last section we analyze the possibilities of strengthening the development of competitiveness and the ways to industrial development.

Argentina's industrialization started off in the late 19th century and developed alongside the dynamic agro-export model which dominated the economy until the beginning of the 1930s. At that time, industry began to occupy a favoured position in the Argentine economy through the process known as import substituting industrialization (ISI). In fact during the second phase of ISI, which began in 1958, industrial activities became the country's engine of economic growth and job creation, and its base for capital accumulation. At the same time, industry was developing technological capabilities which were remarkable for the Latin American context at that time.

However, by the mid-1970s, this model of industrialization was facing a series of inherent difficulties. A structural reform programme linked to the opening-up of the economy was implemented; but the failure of this policy (in its detailed application) in the period 1976-81 ended up by dislocating the production structure.

In the 1980s and 1990's, another organizational model for the production of industrial goods emerged in Argentina which was very

different from the substitution strategy. It was coupled to changes at the technological frontier and to the instability and uncertainty of the macroeconomic setting, and it gave rise to very substantial modifications at several levels: institutional, sectoral and microeconomic, and also in terms of the way in which Argentine industry was linked into the global economy. After the convertibility collapse, the manufacturing sector 's recovery is based on an effort to become, once again, a pillar of the economic and social development.

I. Introduction

Argentina's industrialization started off in the late 19th century and developed alongside the dynamic agro-export model which dominated the economy until the beginning of the 1930s. At that time, industry began to occupy a favoured position in the Argentine economy through the process known as import substituting industrialization (ISI). In fact during the second phase of ISI, which began in 1958, industrial activities became the country's engine of economic growth and job creation, and its base for capital accumulation. At the same time, industry was developing technological capabilities which were remarkable for the Latin American context at that time.

However, by the mid-1970s, this model of industrialization was facing a series of inherent difficulties. These included problems related to the type of industrial organization which had emerged - e.g., plants of too small a scale, the lack of subcontractors and specialized suppliers, poor international competitiveness, etc. – and to the macroeconomic functioning of the Argentine economy - e.g. strong transfers of income, balance-of-payments deficits and volatility among other problems.

Meanwhile, progress made in the more advanced industrial countries was generating a changeover to a new techno-production pattern in which the models for organizing industrial production were based on a different kind of logic from the prevailing 'Fordist' mass-production models. One of the key factors behind such changes was the spectacular progress occurring in microelectronics - which made the transition possible from the 'electromechanical word' to the 'electronic word'. On the other hand, when faced by difficulties in restoring industrial growth, the local response was not based on taking

advantage of the stocks of technology accumulated in the previous stage (so as to overcome the difficulties in that way), but on an effort to introduce a structural reform programme linked to the opening-up of the economy. However the failure of this policy and programme (in its detailed application) in the period 1976-81 ended up by dislocating the production structure.

In the 1980s and 1990's, another organizational model for the production of industrial goods emerged in Argentina which was very different from the substitution strategy. It was coupled to changes at the technological frontier and to the instability and uncertainty of the macroeconomic setting, and it gave rise to very substantial modifications at several levels: institutional, sectoral and microeconomic, and also in terms of the way in which Argentine industry was linked into the global economy. After the convertibility collapse, the manufacturing sector 's recovery is based on an effort to become, once again, a pillar of the economic and social development.

The goal of this document is to analyse the main characteristics of Argentine manufacturing industry and the development phases (going back more than a century), especially, to concentrate on its structural features during the 1980s and on the changes that have occurred since the Convertibility Plan was introduced – between 1991 and 2001 -, the most recent transformations between 2002 and 2006 and, finally, in the last section we analyze the possibilities of strengthening the development of competitiveness and the ways to industrial development.

II. The first stages of Argentine industrial development

Argentina's present industrial structure is the result of a long series of developments that started over a century ago. The ensuing industrial activities did not merely produce goods but led, at the same time, to the growth of learning processes, to the incorporation of technology, to continuous improvements in skills and training, and to the setting up of institutional and regulatory frameworks. They also led to the country developing a modified pattern of specialization within the international division of labour, to the economic organization of its markets, to linkages with other economic activities, etc. Significant changes over time in each of the above factors in turn helped to shape the social organization for production of manufactured goods. As it developed, the Argentine economy came to be noted for its degree of industrialization within the Latin American context. However, if comparison is made with the economies of more advanced countries then the central features of Argentina's economy clearly identify it as a 'semi-industrialized' one.

The changes in the country's level of industrialization during the period 1900-90 can be appreciated by considering the share of Gross Domestic Product which was produced by manufacturing industry.

The manufacturing industry's growing and uninterrupted share in Argentina's economy goes as far as the mid-1970's, point in time when a process of continuous decline began. The resulting fall in its share of GDP was so great that the degree of industrialization at the start of the 1990s was similar to its level in the 1940s.

Table 1
MANUFACTURING GDP (AT FACTOR COST)
 (Percentages)

Period	Share
1900-1909	15,35
1910-1919	16,54
1920-1929	18,65
1930-1939	21,06
1940-1949	24,22
1950-1959	24,80
1960-1969	28,18
1970-1979	27,23
1980-1990	23,60

Source: based on data available in 1991 from the database of the *Banco Central de la República Argentina*.

In broad terms three major periods can be identified in Argentina's industrialization process. The first one begins around 1880 when the country made a radical shift into becoming integrated with the rest of the world as an agro-export economy and this position continued until the crisis of 1930. The second period, extending up until the late 1970s refers to the application of the strategy of “modelo de industrialización sustitutivo de importaciones” (ISI) within a semi-closed economy framework, and it includes, in its five-decade span, various subperiods. The third period starts with the failure of the 1979-81 economic openness policy and the lengthy macroeconomic disruption of the country which lasted from the 1970's to the 1990.

The Argentine agro-export model was based on specializing in the production of grains and meat through exploiting the country's abundant and competitive natural resources. Once it had got its institutional structure settled, Argentina vigorously won a place for itself in the international economy as a dynamic exporter of primary goods and as an importer of capital and manufactured goods. It operated an open economy regulated by the gold standard. Its economic fluctuations were linked to weather conditions (which affected total agricultural output) and to the British business cycle (as Britain was its main international trading partner).

At the same time, conditions began to arise which were favourable for the incipient industrialization of the country. These conditions largely took the form of the ‘stimuli’ which Hirschman (1968) described for Latin America (Hirshman, 1968).

Among them can be mentioned: (1) the existence of competitive goods in the primary sector that had to be processed in some way before being exported (meat, tannin, leather, wool, flour, etc.); (2) a flow of European immigrants who already possessed industrial skills; (3) the early development of generalized education and technical and professional specialization; (4) difficulties in external supply during World War I; (5) derived demands stemming from primary production and from infrastructure needs (e.g. agricultural machinery, large railway maintenance networks, cement, etc.); (6) transportation costs and natural protective barriers; and (7) sustained rapid growth in the size of the domestic market. These factors all contributed to the gradual development of the most significant industrial structure in the region which, even before the crisis of the agro-export model, already produced 20 per cent of GDP and consisted of over 50,000 industrial establishments.

The end of the expansion of the agricultural frontier, together with the 1929 international crisis and the conflictive three-sided relationship between Argentina, the United Kingdom and the United States, caused the demise of the agro-export model. The imposition of foreign-exchange control in 1931 and of import permits in 1933, and the splitting into two of the foreign exchange

market and the raising of import tariffs (mainly for fiscal reasons) are illustrative of the new manner in which the economy operated.

Table 2
ARGENTINE INDUSTRIAL DEVELOPMENT SIMPLIFIED PHASES

The company and the Environment	Agroexporter with industrialization (1880 - 1929)	Substitutive Internal market (1930 - 1978)	Open market with restructuring and globalization (1979 - 1990)
INTERNATIONAL SCENARIO	Industrial consolidation British hegemony in production and finance Direct Foreign Investment Associated with infrastructure, financing and raw material and primary resource capture	Fordist production American hegemony and emergence of NICs Protected markets Direct Foreign Investment Associated with the capture of the internal market and the factor's price	Flexible organization Growth in Germany, Japan and South-East Asia Economic blocs Globalization and concentration of production Financial internationalization Direct Foreign Investment Strong dynamism associated with globalization, concentration and privatization.
GLOBAL FRAMEWORK	Agroexporting model integrated into the world with incipient induction to industrialization Institutional consolidation Self-regulated cycle	Import-substitutive industrialization Strong State participation State regulation	Permanent programs of stabilization search Trade and financial opening Privatization and deregulation Productive transformation with growing heterogeneity
INDUSTRIAL			
1. Dynamic sectors	Food, textiles Other for internal consumption	Food, textiles Other for internal consumption	Steel and aluminum petrochemical Pulp and paper Oil vegetables
2. Destination	Agroindustrial exports Internal market	Internal market	Exports and internal market
3. Origin of technology	Imports	Local adaptation and development Of technologies far from "best practice"	Import and local adaptation. Lower technological "gap" in some sectors
4. Techno-productive organization	Dual: Sectors with state-of-the-art technologies (for exports) and Dual: Sectors with state-of-the-art technologies (for exports) and other semicraft ones (for the local market)	Short Series with some technology "Idiosyncratic" fordism	Heterogeneity: Sectors with Fordist Technologies and organization Attempts of flexibility and global value chains
LEADERS	G.E. related to SMEs exports	Public companies E.T. branch offices SMEs	Nacional capital G.E. Some SMEs E.T. branch offices
ORGANIZATION FORMS	Family groups	Public companies Family companies TC: Leaders in the local market and marginals in the world	Multicompanies

Source: Bisang *et. al*, 1992.

The result of this closed-economy scheme was that foreign trade gradually became less and less important in terms of its share of GDP. These were, in fact, the conditions in which the first subperiod of ISI developed. The substitution process was based on the incipient industrialization already achieved in the first stage and it advanced very quickly into the 'easy' sectors of manufacturing production. Industries which produced consumer goods (food, textiles, clothing), household electrical appliances, simple machinery and straightforward metal products, as well as

those industrial activities associated with construction, were the most dynamic activities during this subperiod, which continued until Perón took office in 1945.

Industrialization quickly deepened during this decade. Basically, this was due to the expansion of existing activities, the intensive utilization of labour, and the broadening of the domestic market to incorporate the entire population. The State took up a very active role both in the production of basic inputs and in operating a wide range of policy instruments. The latter included: administering import quotas, financing industrial activities through the Banco Industrial and the Central Bank's rediscounting facilities, promoting specific industrial sectors, and using non-tariff mechanisms. Industry had clearly specialized in producing consumer goods exclusively for the domestic market, but constraints on its dynamic further growth were found to exist as its level of technological obsolescence increased, and as the business community found itself unable - either entrepreneurially or technologically - to progress into more complex kinds of manufacturing, in a situation when continuous restrictions were imposed by the balance of payments.

In 1958 the last ISI subperiod started, which ran until the mid-1970s. It was based on the petrochemical industry and on the complex of metal products and machinery industries (of which the motor vehicles industry was the most representative sector), as well as its base for capital accumulation. The empty cells of the input-output matrix were progressively filled in, and this involved some extensive participation by subsidiaries of transnational corporations. This took place in the framework of a highly protected economy and was a response to the explicit policy goal of raising the level of national economic self-sufficiency.

These changes gave rise to a process of rapid technological development based on installing technologies which had been developed in more advanced countries yet adapting them significantly to the local environment. This meant copying 'Fordist' production-line methods yet incorporating a strong local component into them. However, this led to various problems: the output of these plants was generated in short production series and was exclusively oriented to the local market so that the scale of output from these plants was, on average, some ten times lower than that of similar plants operating at the technological frontier; the level of vertical integration was notably high due to the weak development of specialized suppliers and subcontractors in a context where transaction costs were high; and the production mix was also markedly diversified. These were only some of the problems of international competitiveness affecting the Argentine industrial structure. In addition, Argentina's macroeconomic constraints were an obstacle for financing the transfer of income to industrial activities. Furthermore, it was industry's own trade deficit that restricted the possibilities of achieving industrial growth over any sustained period without engendering a balance-of-payments crisis.

The perception of these problems led to a search for policy solutions within the framework of ISI. On the one hand, programmes of incentives to export manufactured goods were introduced. Their aim was simultaneously to generate scarce foreign currency, to expand the overall market (because the domestic market was showing signs of saturation), and to stimulate the overall competitiveness of industry. The results were quite appreciable: while in 1960 exports of non-traditional goods were practically nonexistent, in 1975 they represented a quarter of the country's exports. On the other hand, the attempt was made to deepen the extent of ISI by reducing the country's heavy dependence on imports of basic industrial inputs such as steel, aluminium, paper and petrochemicals. This led the government to promote some major industrial projects to produce these inputs locally. The promotion was based on (a) the amount of foreign currency savings these projects would produce and (b) the prospect that these projects would also lead to the broadening of the domestic market through the forward linkages that the new factories would have with high-value-added and employment-generating activities.¹ Meanwhile the government also continued to

¹ The implementation of these projects during the 1980's, while the ISI model was being dismantled, brought about significant structural changes, but with outcomes different from those expected.

operate its existing promotional mechanisms, as well as utilizing the purchasing power and investment programmes of public-sector and state-owned enterprises as significant instruments of industrial policy throughout this subperiod.

III. The breakdown of ISI in Argentina

The economic policy launched in April 1976 profoundly changed the guidelines and directions which industry had been following until then. The new authorities' full confidence in the resource-allocation capabilities of market forces and in the state's subsidiary role were the philosophical underpinnings for a program of market liberalization followed by external openness. It aimed to eliminate the entire set of regulations, subsidies and privileges established in the past in an attempt to modernize and increase the efficiency of the economy (Canitrot, 1983; Martínez de Hoz, 1988; Sourrouille y otros, 1985; Damil y otros, 1988; Rodríguez C., 1979).

As far as industrial policy is concerned, two distinct subperiods can be identified for which the dividing line can be placed around late 1978. The years before that date were characterized by a recovery in the production of durable consumer goods and capital goods, and were associated with increasing investment and with a regressive redistribution of income. In this period - which the authorities labelled as that of the 'sinceramiento' of the economy (which translates roughly as 'making the economy sincere') - a start was made on reducing import tariffs (Berlinsky, 1978). In fact, strong reductions were imposed - on average 40 percentage points - so that tariffs fell from the previously prevailing average level of 90 per cent to 50 per cent. In spite of this, imports did not rise significantly during the next three years. The explanation of this phenomenon is, on the one hand, that increased competitiveness had been achieved in the previous decade, which meant that considerable parts of the former tariff structure were redundant, and on the other hand, that the exchange rate

(in terms of local-currency units per dollar) had been maintained at a high level. Furthermore, the financial reform approved in 1977 liberalized the interest rate and created a totally different mechanism for the allocation of credit.²

The second subperiod began in late 1978 with the detailed application of a policy which was based on the monetarist school's model of the open economy (i.e., the monetary approach to the balance of payments). The goal which the authorities hoped to achieve through this policy was progressively to bring down the domestic inflation rate until it matched the international one. The intention was to use deliberate government control of the exchange rate variable to achieve a progressive downward adjustment of the external rate of inflation as measured in terms of local currency. A pre-established programme of devaluations of the local currency against the U.S. dollar was put in place in the form of a published timetable (the 'tablita') which specified a steadily decreasing rate of devaluation over time, within a context of increasing economic openness to the outside world (both in the capital market and in product markets); it was based on the assumption that domestic interest and inflation rates would converge to the corresponding international rates. It was assumed - within the rationale of the passive monetary scheme - that convergence would be achieved after a transition period whose length would be determined by the different speeds at which the prices of goods would get adjusted, depending on whether they were traded in international markets or not. Then, once convergence was achieved, a new relative price structure would thus be in force and established. Such a price structure would induce resource allocation to favour the development of sectors with comparative advantages which could produce on an international scale and, combined with the tariff policy, it would also force less-efficient sectors to close down, so that the overall productivity of the economy would increase.

However, 'convergence' was never achieved. Adjustment in the prices of tradable goods was slow and imperfect whilst the mechanisms envisaged to operate for non-tradable goods did not produce the expected results. In addition, the trend in level of the domestic interest-rate was greatly affected by a growing premium (i.e. a surcharge) that was reflected in this rate owing to the prevailing uncertainty and the high costs of financial intermediation. As for the exchange rate, its devaluation timetable had been devised on the basis of a forecast level of inflation that was lower than the real one - thus producing a continuous overvaluation of the local currency (the peso).

This overvaluation of the peso, combined with the tariff reductions, strongly affected the trade balance and opened the door to a massive influx of imported products. Furthermore, there was also an unrestricted inflow of external capital - taking advantage of the freedoms conferred by the external financial openness of the economy. Almost all this was short-term capital coming from a financial market characterized by both high liquidity and high domestic interest rates. This inflow of capital compensated for the current-account deficits and resulted in a significant increase in foreign indebtedness. Moreover these transactions - because of their serious impact on the balance of payments - gave early warning that a devaluation was impending in what was a highly liquid capital market given the very short-term maturity dates of deposits. In addition, fiscal policy was not sufficiently carefully designed: transfers of income that were difficult to justify continued throughout the whole period without the necessary screening or assessment. In addition, all these events were unfolding in an atmosphere in which changes in the political and economic authorities were expected. As a result, the risk premium for borrowing foreign capital rose considerably, which in turn led to even higher interest rates.

In that context, the concurrence of several negative factors produced the deepest crisis for the Argentine industrial sector in its entire history. The most important of these factors were that both

² From the 1930 crisis until today, the Argentine financial system was characterized by the Central Bank's regulation of redescounting facilities for the granting of credit at highly negative interest rates. Industrial firms had a favored treatment in terms of the credit allocations made under this system.

domestic demand and export demand for locally produced industrial goods were low: domestic demand for these goods had been hit by the influx of competitive imported products, and export demand for them had been reduced by the exchange-rate policy which had caused the peso to become greatly overvalued. At the same time, the existence of high interest rates largely cancelled out any possibility of making profits from production activity, and the fact that these interest rates were steadily rising resulted in firms acquiring levels of indebtedness that often exceeded the value of their assets.³

In March 1981, there was a change of authorities within the military regime. This produced a series of short-run measures aimed at resolving the most pressing problems in the production sector of the economy. Nevertheless, the stagnation of the industrial sector continued throughout this period, which was one marked by continuous devaluations of the domestic currency and the persistence of positive interest rates. The business sector centered its claims on the need to solve their critical indebtedness problems. Towards mid-1982, a medium-term financing system was established for firms based on regulated interest rates. These regulated rates, in combination with a growing inflation rate, provoked a thoroughgoing 'liquidation of the liabilities' of firms and provided a major source of relief for financial institutions. In addition, the State took over most of the private foreign debt through implementing a system of exchange-rate-risk insurance. The result brought about by these two mechanisms was to 'socialize' the losses of the business sector (i.e. to nationalize private business debts). By this time, a massive volume of foreign debt had built up. Its level was such that the interest payments required to service it far surpassed even the most optimistic trade-balance forecasts. The revaluation of the exchange rate and the newly imposed restrictions on imports (brought in because of the huge foreign-debt burden) created conditions that signified renewed protection for the industrial sector. The import coefficient of the Argentine economy once again approached the levels that it had been at before the economic-openness policy was applied.

³ The very marked changes in relative prices that occurred during this period were favourable to service activities and to businesses producing nontradable goods. In contrast, the tradable industrial goods sectors suffered a profound fall in their relative prices and found themselves having to pay heavy loan-servicing charges based on high real interest rates.

IV. The post debt-crisis period (1982-1990)

The local macroeconomic framework was the key determinant of a great many of the transformations that occurred between 1982 and 1990 (Bonvecchi, 1992; Heymann, xxxx; Machinea, 1990; Carciofi, 1990; Damill y otros, 1989). The application of the 'monetary approach to the balance of payments' in the late 1970s had proved to be the breaking point of the previous industrialization model, and the failure of this monetarist policy and the huge ensuing level of foreign indebtedness generated macroeconomic instability and uncertainty for the whole of the succeeding decade. The instability encompassed both fiscal and external disequilibria, plus a very fragile financial system. 'Stabilization' - which the economy needed - was not merely a constant goal of policy-makers throughout this period, but actually became an utterly unavoidable priority once the economy began to suffer a series of major disturbances, of which the hyperinflationary episodes in 1989 and 1990 were the most blatant. The role of external determinants, the need for coherent and persistent stabilization policies, as well as the contents of such policies, were of great concern to Argentine society throughout this whole period.

The 1982 foreign-debt crisis reversed the sign of the net resource transfers from abroad as a consequence of the interruption of capital inflows and the increase in international interest rates. This immediately resulted in the reemergence and intensification of the structural external disequilibrium of the economy, and (making things worse) there was a simultaneous financial crisis in the public sector. These two basic disequilibria were complemented by the short-run dynamics of the economy in the sense that the high-inflation regime

and financial fragility amplified and sharpened the consequences of the measures adopted specifically to correct these disequilibria. Therefore the challenge facing economic policy-makers was to identify an efficient way to correct the structural imbalances while reducing inflation but without incurring excessive costs in terms of production, employment and real wages.

External disequilibrium can be characterized by the imbalance between the flow of income that a country can generate and the magnitude of the external payment commitments that its debt stock imposes. Argentina's search for large foreign-trade surpluses through devaluations of the local currency and the contraction of domestic expenditure led to increases in exports and a drastic decline in imports and investments. The impact of heavy foreign-debt-servicing payments was clearly visible in terms of the resultant deficit in the current account of the balance of payments, and in this respect the public sector was in a particularly unfavourable position due to the steps that had been taken to nationalize the private foreign debt. In turn, the deterioration in the terms of trade strongly eroded the export effort.

The fiscal accounts featured increasing levels of public expenditure which were not being matched by tax revenues, which were declining. The State's usual method in the past for financing such deficits (i.e. raising external and internal indebtedness and through tax by way of inflation) had been thrown out-of-gear by the foreign-debt crisis and by the nationalization of foreign debt - at a time when the severity of the fiscal deficits was increasing.

The prevalence of persistent high inflation produced intense self-propelling inflation-propagation mechanisms and led to high and volatile inflation rates. At the same time, the precarious financial situation caused both by the demonetization process and lack of external financing was one of the main obstacles to economic policy management. The obligation to service the foreign debt, was in the hands of the public sector, and trade surpluses existed which were generated by the private sector. This posed acute difficulties to the fiscal authorities for purchasing the much-needed foreign-currency surpluses. In order to obtain such funds the public sector had no choice but either to increase its own surplus, or to finance itself through issuing money or making placements of internal debt, or else to fall into foreign-payment arrears. Each of these options had disadvantages and unwanted effects. The existence of these macroeconomic disequilibria produced a permanent climate of uncertainty which damaged the investment process and encouraged substantial 'capital flight'.

Three major economic policy programmes can be highlighted during this period: the Austral Plan, the Plan Primavera (the Spring Plan) and the Bunge-and-Born Plan. Each of these plans aimed to secure surpluses in the trade balance, and also attempted to improve control over nominal aggregate demand, to correct relative prices, and to reorient the process of expectations formation. In every case they came up against obstacles to sustaining their fiscal achievements because that proved to be incompatible with the real possibilities that were available from internal, external and monetary financing. As a consequence, it came increasingly to be understood that structural reforms were essential.

Between 1980 and 1990 the performance of the main economic indicators was not very encouraging and the adjustment process had a high social cost. Only exports moved in a positive direction with 78% growth between 1980 and 1990. The remaining indicators revealed the profound deterioration of the economy: GDP diminished by 9.4%, industrial output by 24%, and consumption by 15.8%; imports and investment went down by 58.9% and 70.1%, respectively; GDP per capita was reduced by 25%. In turn, the rate of open unemployment doubled, while the level of industrial employment diminished by around 30% and the average industrial real wage rate was 24% lower in 1990 than it had been at the beginning of the 1980s. In line with this, a process of income concentration was observed which was linked to a more regressive income distribution pattern and to worsening states of extreme poverty.

These new conditions generated significant sectoral and microeconomic changes. As a result, unlike during previous stages when the industrial sector had been the engine of growth in the economy, the period 1975-90 was characterized by: (1) the stagnation of manufacturing activities (which lost more than 5% of their GDP share); (2) the absence of new job creation at a time of serious structural difficulties in the labour market; and (3) investment levels that fell below the level of capital depreciation, producing decapitalization in the manufacturing sector. However, it would not be correct to conclude that manufacturing industry at the start of the 1990s was in a stagnant, damaged state producing goods under the same pattern of social organization that had prevailed throughout the import substitution stage. Instead, industrial activities had undergone a set of profound structural changes that, in a summary manner, can be described as having involved 'regressive restructuring' and a 'growing degree of structural heterogeneity'.

The 'regressive' character arises mainly from two aspects: the first concerns the inability shown by the economy to base the restructuring of industry on the positive aspects that had been built up in four decades of import substitution - during which knowledge, abilities, engineering and entrepreneurial skills, equipment, human resources, etc. had all been accumulated. It is true that these aspects were also connected to the serious problems that had caused the ISI model to run out of impetus. However a truly efficient allocation of resources would have been one that led to the overcoming of these problems while retaining the positive assets that existed within the stock of accumulated capabilities. Countless examples of how this criterion was not followed can be found in Argentina's restructuring experience at corporate and sectoral levels, and with regard to technology and human resources.

The second aspect refers to the income transfers that took place during the restructuring process. On the one hand, the new specialization pattern for Argentine industry which emerged from the process did not have a sufficiently good fit with the country's factor endowment, and nor did it provide enough scope for generating dynamic competitive advantages. On the other hand, the deterioration in public sector social policies (such as education, health, housing, infrastructure) that accompanied the country's fiscal dislocation had a serious impact on social equality and, in turn, on the economy's systemic competitiveness.

So far as, 'growing heterogeneity' is concerned, this was brought about by the occurrence of strongly contrasting performances at the sectoral level and, even more so, at the firm level. The aggregate position of stagnation can be broken down into (a) a large group of firms that contracted in size or got dismantled or left behind, whilst, simultaneously, (b) other firms expanded and modernized their production structures. There are plenty of documented cases of successful microeconomic performance. However the sum total of all such cases did not generate enough macroeconomic strength to establish a new path for economic growth in Argentina.

1. Sectoral composition of industrial output

In the past 15 years, within a framework of stagnating production, the share of GDP held by manufacturing industry fell noticeably. Yet, at the same time, a deep-rooted transformation in the industrial fabric took place - involving both greater business concentration and greater structural heterogeneity, as well as significant changes in manufacturing specialization within industry (Kosacoff and Aspiazú, 1989; Katz and Kosacoff, 1989; Chudnovsky, 1991; Nochteff, 1991).

In the previous decade (1964-74) industry had grown at an annual average rate of 7% as a consequence of a rise in its investment rate. Industry's share of GDP had increased from 25% to 28% as it hired more labour, increased productivity, paid improved real wages, and saw its relative prices fall. The machinery and metal products industries and the petrochemical complex were the sectors that had contributed the impulse for this excellent performance through their activities in supplying segments of the domestic market where there was pent-up demand, and this was

complemented by incipient exports in the 1970s. The sectors that have just been mentioned, together with the food industry, accounted for more than 60% of industrial output at that time.

By the mid-1970s the Argentine industrial structure had become highly diversified. This met the import-substitution goal of maximizing the domestic supply of manufactured products. However, two of the noticeable contrasts between Argentina's industrialization process and that of advanced industrialized societies were that (1) the capital-goods industries were not well developed and (2) the production of widely used intermediate goods (like aluminium, paper, steel, petrochemicals, etc.) was more limited.

It was no mere coincidence that underdevelopment of their capital goods industries was a feature common to most semi-industrialized countries. The requirements posed by major innovations, by technological economies of scale, by the need for linkage to a national innovation system and by the need for a clear national policy all acted as insuperable barriers to the expansion of these industries in these countries. Instead, the goal of intensified import substitution for basic inputs was given priority in all development plans throughout the ISI period. Paradoxically the greatest efforts in this direction in Argentina were made during the period of the economic-openness policy in 1976-81, which attests to the inconsistency of the economic policies pursued during that period. It also produced the most important change in the country's industrial structure that occurred in the 1980s.

In the period 1975-1990 industrial output in Argentina fell by around 25% due to low productivity and to the shift of activity into the services sector which took place. The effect was that industry's share of GDP fell from 28.3% to 20.7%. These conditions were the background for sharply contrasting behaviours at both microeconomic and sectoral levels. There were many cases of firms which applied restructuring processes that increased their competitiveness, but, at the same time, there were many other cases of firms which got dismantled, and of engineering teams and qualified human resources who were disbanded. The aggregate result was that output remained stagnant - because the combined effect of all the successful cases did not produce enough impetus to generate a sustainable development model for the economy in the medium term.

In terms of sector changes, the main ones which occurred can be classified broadly as follows:

- (a) industries that increased both their own output and their share of overall industrial output: the most conspicuous cases were in the intermediate inputs industries. Basic metals production grew between 1970 and 1990 at an average rate of 2.3% per year and chemical industry production did so at 1.4% per year. In combination these two sectors accounted for less than 20% of industrial output in the 1970s, but had increased their share to almost 30 % by 1990.
- (b) industries with a stagnant level of output that nevertheless increased their share of overall industrial output: the food and drinks sector maintained its level of production. However, given that industry as a whole performed so poorly, this sector's share of industrial output grew from 21.7 % to 26.5% between 1970 and 1990.
- (c) industries that experienced declines both in their own output and in their share of overall industrial output: the first such sector deserving mention is the machinery and equipment sector whose output fell at an average rate of 1.6% per year between 1970 and 1990. Such was the magnitude of this decline that by 1990 this sector was producing less than half the volume of goods it had produced in the mid-1970s. It is therefore no surprise that in 1990 its share of industrial output had fallen to less than 20%, whereas its peak share, in 1977, had been 31.6%. Very similar behaviour was recorded by a group of industries associated with consumer goods and with construction, including the textiles and clothing industry, the wood and furniture industry, and the non-metallic minerals industry.

These cumulative changes are clearly apparent in the figures for the physical volume of output of some highly representative goods produced between 1970 and 1990. With reference to inputs, for example, the growth in the volume of petrochemicals, paper and cellulose, aluminium, steel and rolled products produced was notable. In contrast, production of machine tools and tractor units in the 1988-90 three-year period amounted to only one-quarter of its level in the 1973-75 three-year period, whilst motor vehicle production had halved. The production of energy-related natural resources grew significantly - especially in the case of natural gas extraction. Lastly, within the food sector, there was remarkable growth in the volume of processed vegetable-oils produced, whilst meat-packing output and sugar-refinery production declined.

These changes in sector specialization of Argentine industry occurred in conditions of stagnant domestic demand, and they were also affected by the 'desubstitution' process that took place between 1979 and 1981 and by the surprising progress of exports in the 1980s. The fastest-growing activities were (a) those linked to the expanded endowment of natural resources and (b) those involved in the development of large-scale input-manufacturing plants based on capital-intensive continuous processes (where forward linkages into the manufacture of differentiated, higher-value-added goods were not pursued). By contrast a 'dismantling' process occurred in several industries which had tended to make intensive use of well-qualified staff and to require extensive technological expertise and efforts. In particular, much ground was lost by the domestic complex of metal products and machinery industries and by the domestic electronics industries, even though both sets of industries had had a good starting point.

2. Industrial employment

The central features that characterized the labour market during the import substitution stage changed radically during the subsequent fifteen years. During ISI, Argentina was widely known in Latin America for its well-qualified labour force, which was the product of concurrent factors including immigration inflows, the learning gained from local technological developments, and the expansion at all levels of formal education (as this had extended to virtually the whole society).

In general terms there was not a serious unemployment problem during the ISI stage, and this can be appreciated in the low open-unemployment levels and the not very significant extent of the informal job network. In fact, a comparison between the informal segment of the Argentine labour market and its equivalent in other countries in the same region during the ISI period shows that the informal job network in Argentina did not have the typical features that prevailed elsewhere of functioning as a 'refuge'. In fact it was associated with the payment of wages that were not so very low and with offering some modicum of job stability. A key factor which gave rise to this kind of labour-market structure was the slow rate of growth of the economically active population which - just because it was only growing slowly - did not put significant pressure on the formal labour market. On the contrary, inflows of immigrants from neighbouring countries complemented the labour force by filling unskilled job positions during expansionary periods.

Furthermore, the unions also played a key role in the labour market, in particular in determining wages. This led to real wage levels being higher and their distribution more even than was the case elsewhere in Latin America. Consequently, there was a comparatively better distribution of income and a lower degree of poverty and social exclusion. In this context, the industrial sector was the 'key' factor in job creation and it contributed to upward social mobility in the population by expanding the employment opportunities open to those with a formal education. In addition, productivity increases were positively correlated with improvements in real wages during the ISI period.

However a trend towards stagnation in the level of industrial employment became apparent in 1975 and persistent up to today, combined with growing heterogeneity among firms, the disruption

of staff-training programs and a pronounced decline in the population's standard of living. Some of the most prominent aspects associated with the functioning of the labour market in this period are as follows (Beccaria, 1992).

The level of industrial employment in 1990 was similar to that of 1973, but lower than its level in 1974 and 1975. The loss of the capacity to create manufacturing jobs occurred in an increasingly heterogeneous context. Employment in small- and medium-sized businesses went up by 25% whilst production stagnated, so productivity in these firms fell. In contrast, large corporations dismissed large numbers of their staff, and that made a significant contribution to boosting productivity in those firms.

A combination of factors contributed to the productivity gains made by the large firms. One such factor was the 'overemployment' that existed in industrial plants in the 1973-75 period as a result of closed-economy conditions and unionization. In 1976, a five-year period began during which this overemployment was continuously reduced and union power declined. Further contributions to improved productivity came from the incorporation of machinery and equipment, particularly in the 1978-80 period, and from the bringing-in of major organizational changes involving disembodied technologies.

The changes that took place in the pattern of specialization by Argentine industry can be described in a stylized way in terms of (1) the growth that occurred in large-scale activities that made intensive use of capital and/or natural resources, as opposed to (2) the comparative decline that took place in the metal products and machinery industries and in those activities which were labour intensive, especially in those subsectors where better-qualified staff were employed. These changes lowered the employment-production elasticity and the employment-investment elasticity, as well as reducing the qualifications demanded for filling new job positions.

The increased rate of underemployment was at first mitigated by the fact that workers were 'discouraged' by the fall in wage levels and by the growth of the informal sector. But as the prevailing trends continued and took stronger hold, both the unemployment and underemployment rates grew sharply, from 4.2 % and 5%, respectively in 1974 to 7.4% and 9%, respectively, in 1990. The unstructured (i.e. informal) labour market then became a 'refuge' as the proportion of people in formal employment decreased markedly. Moreover even within formal employment the level of industrial employment lost ground in favour of the growing numbers of people employed in low-productivity activities within the services sector - a process labelled as 'low- productivity outsourcing'. All these changes went in the same direction, that is, towards diminishing the waged-and-salaried portion of the labour market whilst increasing the portion corresponding to self-employment.

This process was associated with a virtually continuous fall in real wages. By 1990 these were at a level one-third less than in 1974 as a result of the tremendous impact caused by the fall in demand for labour and the changes in the sectoral composition of industry and the weakening of union structures. In conjunction with the strong business-concentration process that was taking place, the share of the national income corresponding to remunerations also fell continuously (from 45% in 1974 to 32% in 1990) and, at the same time, the proportion of households below the poverty line sharply increased (from 8% in 1980 to 27% in 1990). Furthermore this regressive pattern of income distribution was compounded both by the fall that occurred in per-capita social expenditure and by the fact that such expenditure was inefficiently allocated. This led to the across-the-board deterioration in public services and thus to a further adverse impact on the less-privileged groups.

3. The investment process

A series of opposing forces influenced the investment process. The net result was that structural heterogeneity within industry increased and the average age of equipment rose. The replacement

rate for equipment became lower than the depreciation rate. A series of indicators showed the discontinuity and the decline in the volume of machinery and equipment being installed by industry. The ratio between investment and GDP, which was near to about 23% in the 1970s, diminished to less than half that rate.³ In addition, the prevalence of high positive interest rates in contrast with the negative ones that obtained in earlier periods diverted resources into non-industrial investments. The strong shift toward the transnationalization of savings, the nonexistence of a long-term capital market, and the persistence of instability, uncertainty and inflation were some of the other adverse conditions that further debilitated the investment process. To sum up, the decapitalization and the loss of impetus in the capital accumulation process by industry were, in overall terms, amongst the most negative features of industrial performance during this period.

Nevertheless a set of factors pulling in the opposite direction can be itemized, which induced capital formation activity by various firms and sectors. As will be seen below one strong source of subsidies was the set of industrial promotion schemes in force. And there were other subsidy mechanisms operating, such as the capitalization of foreign debt (Fuchs, 1990) (external debt-equity swap programmes). Furthermore, the overvaluation of the domestic currency during 1978-81 led to a substantial quantity of machinery and equipment being imported and installed. The lines of credit that were available from the Banco Nacional de Desarrollo (National Development Bank) for purchasing of capital goods, and the preferential credits on offer both from international organizations and from the Spanish and Italian governments, also favoured the installation of new equipment. Another appreciable influence (despite its negative effects mentioned above) came from the prevalence of positive interest rates which, together with other factors, had an important impact on local industrial organization. Since heavy interest charges would result from firms managing excessive stocks inefficiently, or from their operating discontinuous processes owing to downtime, or from them having poorly organized purchasing systems, etc. this gradually led firms to install automated technologies within their factory 'lay-outs' so as to handle a range of tasks including process-control, inventory management, upgraded quality-controls, etc.

The incipient diffusion of new technologies began to have a major influence on the organization of production. This was combined with labour-force rationalization, and the result was strongly to boost productivity and significantly to modify labour-management relationships. Also, some engineering-intensive projects came to fruition owing to the relatively low cost of engineering skills in the local environment. The installation of all this modern equipment and technology was much more carefully planned and rigorously assessed than in the past, and this kind of investment was associated with greater capital productivity. Nevertheless, the step that was really needed, in many cases, to achieve significant further gains of this kind and become still more competitive, was for the existing ageing machinery and equipment - which often dated back quite a few decades - to be replaced.

The fact that industrial promotion policies continued in force, both nationwide and in Tierra del Fuego and the provinces (e. g. in San Luis, La Rioja, Catamarca and San Juan), played a major role in the location of industrial activities. Their goals and implementation of such policies were issues that produced widespread controversy, including in the National Congress.

The national industrial promotion programme concentrated mainly on providing subsidies for the implementation and start-up of some 50 projects involving large capital-intensive plants for producing intermediate goods. These projects had been justified in the early 1970s in terms of increasing the level of national self-sufficiency within the import substitution model. As for the special promotion regime for Tierra del Fuego, it became more effective in the late 1970s when investors were given the incentive of bringing inputs in free of import levies and then enjoying high

³ The fall in the investment coefficient could be observed in both the private and public sectors. There was a strong correlation between the level of public-sector investment and its impact as an inducer of investment in private sector industrial firms.

protection for their finished goods. This scheme encouraged a whole group of firms to become established there (including, especially, some consumer electronics producers) whose production activities used only a slight share of local content and whose requirements for local engineering inputs were absolutely minimal. Finally, as regards, the industrial promotion policies in the provinces, they attracted firms which mostly specialized in final-stage processing of products for which the manufacturing process had deliberately been split up in order to maximize tax deductions.

The main criticisms levelled at these promotion systems have pointed to problems such as: the poor degree of selectivity used in choosing firms and the lack of a coherent industrialization model to guide such choices; the high fiscal costs involved; the absence of any ex post evaluation of the promotional mechanisms; the discriminatory character of the benefits that were granted; the lack of competitiveness in the way markets were organized; and the nonexistent official supervision of those activities which had benefited from incentives even though the latter were supposed to be connected not just to capital-formation activities but also to some aspects of how firms were operated. On the positive side, these promotional mechanisms did generate an initial decentralizing shift of activities towards relatively less-developed regions, and they did enable many firms to set up and restructure when otherwise they would not have done (Azpiazu, 1988; Gatto *et al.*, 1988; Roitter, 1987). Also, the input-producing plants were at a technological standard that was very close to international best practice (Bisang, 1989).

Several of the above aspects were confirmed in a survey that covered 591 industrial firms (Azpiazu *et al.*, 1993). In the period 1983-88 the firms in this survey invested US\$9.5 billion, which amounted to three-quarters of total investment made by Argentine industry. The resources that were channelled into capital formation represented only 5% of their sales. The large influence within this total of a very small number of firms stands out: indeed, only 44 firms, the ones which had made the largest investments, were responsible for over half the surveyed capital formation, and their average investment was US\$109 million per firm. In terms of sectors, the largest amount of investment went into the chemical, petrochemical and basic metals industries (amounting to 60% of the total) whereas smaller amounts were invested in the complex of metal products and machinery industries (12% of the total) and in the textile sector (4% of the total). This demonstrates how dominant the investment made in capital - intensive activities were, as opposed to in more labour-intensive activities or in those which involved making higher-value-added products. In addition, the survey confirmed that a significant proportion of the investments were linked to the industrial promotion schemes. It also revealed how decisive the influence of the large national holding companies and the subsidiaries of transnational companies was, as they were - between then - responsible for 75 per cent of all the investment covered by the survey. Lastly, it is highly indicative that only 30 out of 2,238 projects (representing 12% of the total investment) involved the setting up of 'new industrial plants', whereas the majority of the projects (accounting for 70 per cent of the total investment) involved either plant expansions, equipment renovations, or technological improvements. This means that restructuring processes were particularly prevalent whilst new activities were much less often embarked on.

4. Manufacturing international trade

It is possible to point out that balance of trade of industrial goods showed until 1981 a deficit. However, during the 1980s, such situation was gradually reversed and in the 1988-1990 period it shows a surplus higher than US\$ 4,2 billion. In general terms, this behavior in industrial activity shows, in the first place, a poor export-oriented activity by non-resource industries in the last phase of ISI, which, in turn, were the most import-demanding ones. Such trend is sharply deepened when the economy is opened up in 1979-1981, period in which the strong increase in imports did not match the structural changes to allow competitiveness gains essential for a dynamic export activity.

In this sense, the results came to a unilateral imports opening, reflected in the deterioration of trade balances. Thus, trade deficits recorded in 1980 and 1981 reached US\$5000 million and US\$3700, respectively. The subsequent closing of the economy in 1982 gives rise to a strong change in foreign trade behavior, in which the substitution process of widespread intermediate goods production along with the low levels of domestic activity result in growing surplus balances. This change in the trend slowly boosts the export activity, which, together with the limited level of activity in the domestic market – with lower imports demand and higher export balances – results in the remarkable surplus of 1988/90 (Fuchs and Kosacoff, 1992).

The identification of the different activities regarding their trade balances allows grouping them into three typologies. Firstly, the industrial activities characterized, in the mid 1970's, by its significant positive contribution to the trade balance and which remains constant throughout the series. The most representative example is the food industry as a whole, with very different dynamics in the different segments that compose it. Secondly, there are activities that record a balance change in their trade balances, from an important negative effect in the mid-1970s to a positive one at the end of the period. The most clear examples are in intermediate goods production. Lastly, there is a third group of activities that maintains, throughout the period, structural negative balances which are not reversed. In this category falls most of metalmechanic production.

One of the most significant characteristics in manufactured goods trade is the higher relative importance shown in intra-industrial trade. In this sense, there is an ever-growing share of this kind of trade in the 1974/76 series, to the extent that while in the 1974/1976 period it accounted for 6.3%, it grows up to 14.5% in the 1979/1981 period, and it reaches 29.2% during 1988/1990. While in the 1970's, there are approximately 26 branches, by the late 1980's there are just about 40 industrial branches characterized by their intra-sector trade. The petrochemical complex in particular and, to a lesser degree, the metalmechanical sector and the paper industry are the activities that boosted intra-industrial trade growth in the last 3-month period.

The data presented on the evolution of the balance of assets international trade show various determining features in Argentina's industrial sector's international incorporation. In the 1974-1990 period, three stages have been identified different from the functioning of the economy and its consequent international incorporation: 1) The 1974-1978 period, prior to the opening of the economy, corresponds to the final stage of the ISI model, which, in a semiclosed economy, industrial and resource exports begin to gain momentum, with prevailing external strangling that determined the lack of foreign exchange to obtain foreign intermediate supplies and working capital. 2) The 1979-1981 opening experience with the deterioration of the balance of trade, as a result of the slowdown of the export activity and the notable increase in imports, which derived in a new closure of the economy, but now in a highly imbalanced macroeconomic context. 3) Finally, the 1982-1990 period in which once again, in a semiclosed economy, there are profound transformations as a result of import substitution, a domestic market stagnation and the surprising dynamism of industrial exports, factors which gave rise to significant trade surpluses in the 1988-1990 period.

5. Tariff policies

Argentina's import tariff policies were traditionally associated to fiscal and industrial policies criteria. In 1978, the economy stabilization goals are added these two areas. The use of tariffs as an instrument of industrial policies showed serious flaws: the scarce evaluation of real and distributive effects; the lack of coordination with other industrial policies; the uncertainty resulting from permanent and random modifications; etc. In the period analyzed after the substitution stage, the following stages can be identified:

- The opening phase 1976 1981. The tariff policy had, in this period, two stages. At the first one (until late 1978) tariffs were reduced and a number of quantitative restrictions were done away with. The early tariff reductions, while broad, tended to absorb the “water” existent in the tariff. By late 1976, the legal nominal average had decreased from 94% to 53%, while some estimates of the implicit tariff placed it at 37% for the whole of the manufacturing sector. At the second stage, a new tariff reform was implemented involving a widespread tariff and dispersion reduction and a series of quarterly reductions. The nominal average reached 26% in early 1979 and, according to the reform announced, it should be at 15% in 1984. The constant high inflation rates or, in other words, the failed successive stabilizing strategies, justified immediately moving forward the tariffs reductions schedule. Thus, trade opening was assigned an organizing role of domestic prices. The impact of the trade opening was in fact multiplied by the foreign exchange policy. The combination of the appreciated currency and the reduction in tariffs resulted in a high trade deficit in 1980, after four successive years showing surpluses.
- The external adjustment phase 1982 88. A period of high external restrictions begins and the trade opening phase comes to its end. The main measures involved the resumption of high tariffs and restrictions to imports, withholdings in traditional exports and fiscal incentives for manufacturing companies plus a relatively depreciated foreign exchange with foreign currency market controls. Non-tariff barriers were the main instrument of the import policy. In April 1982, a licence and prior authorization system regulating the entry of all goods was put into effect. Tariffs were also increased, basically for fiscal purposes. In a virtually closed economy, however, both the tariff structure and the non-tariff barriers were “perforated” by an equally broad system of different types of exemptions. Those with the most impact were the ones provided for in both regional and sector promotional regimes. Other exemptions were those from regimes selectively protecting companies or agencies.
- The new opening phase 1989 91. By late 1988, in the context of the new structural reforms negotiated with international financial agencies, both the tariff reduction process and prior authorization regimes gain speed. Trade opening deepened even further when a new administration took office in July 1989, particularly, with the changes in the trade regime and the suspension, on fiscal emergency grounds, of sector promotion regimes. Thus, in January 1991, the import authorization system was abolished and halfway through the year the specific rights that replaced them in the textile and electronics sectors were abolished as well. Along these pre-tariff changes, the levels and structure of nominal tariffs were strongly modified. Between October 1989 and April 1991, the maximum and minimum tariffs were changed eleven times.

The nominal average dropped from 26% in October 1989 to 18% by late 1990. After a very brief period in which there existed a single 22% tariff. The announced reform in April 1991 restated differential tariffs in three levels: 0%, 11% and 22%. In November 1991, due to fiscal reasons and compensations for exchange rate delays, those tariff-free goods began to be levied 5% (with the exception of unproduced capital goods, which remained at 0%) and those included in the intermediate bracket went to be taxed 13%. The average is just lower than 10%. The lack of non-tariff barriers and the low level and dispersion of tariffs define an unprecedented general opening. The greatest exception to this rule is in the finished automobile sector, in which imports seem to be regulated by an ad hoc system. Added to this widespread trade reform is Argentina’s incorporation into Mercosur, due to which it was established a gradual and automatic series of tariff reductions for the subregional trade up to their total elimination by late 1994.

6. Industrial imports

Until the mid-1970's, Argentina's imports reflected the economic growth process within the framework of an import substitution model whose dynamic nucleus was durable goods production and some industrial goods. Approximately two thirds accounted for intermediate goods, a fourth for capital goods and the remainder was equally split into fuels and consumption goods.

As from then, there was a change in the behavior of exports linked to the degree of the economic opening, the evolution of domestic prices relative to the international ones, and changes in the production structure. During the opening period in the second half of the 1970's, amid an extraordinary import growth, intermediate-goods exports notably decreased their share, while, on the other hand, those of capital goods and, above all, those of consumption goods, increased sharply. Once the opening policy was over, and the external sector was profoundly adjusted, total imports dropped dramatically.

Here we describe the five phenomena that explain the evolution and change in the make-up of imports:

- a. Intermediate good import substitution. From the early 1970's to the mid-1980's, different investment projects – mostly encouraged and subsidized by the State, destined to develop the production of some intermediate goods such as steel, aluminum, paper, cement, some basic chemicals, etc. The effect of starting up these plants was a sharp drop in imports between the mid-1970's and the late-1980's.
- b. Changes in the automobile industry. The automobile sector has suffered deep changes in the past 15 years, which are reflected in its degree of opening to imports. Until 1978, this industry showed a very low degree of opening since the sector's regime imposed a very high percentage of national integration, and it virtually did away with finished-goods imports. In the second half of the 1970's, this sector moved from a protected market to a high degree of opening, both in autoparts and in finished-goods. During these years, automobile imports grew spectacularly. Once the opening phase was over in 1981, the finished-goods industry once again enjoyed a protected market, but imports of parts remained open. As from the mid-1980's, the automobile industry takes on a profile quite different from that of the past, with very high levels of imports of finished products, and with companies increasingly focused on Mercosur and the global strategy of their head companies on the basis of autoparts and components.
- c. Transformation of the electronics industry. By the early 1970's, the electronics industry had achieved a significant development locally, with a very interesting technological level and of integration of parts and components. As from 1976, a series of factors influenced the complete transformation of the industry's structure. On the one hand, the abandonment of the specific promotion policies, and on the other hand, the opening policy implemented, determined the discontinuation of the most interesting projects generated in the sector. Additionally, the existence of Tierra del Fuego's promotion regime made it possible to completely disassemble the electronics industry and the setting-up of a electronics consumption goods assembling industry in the area based on the imports of parts and components.
- d. Changes in local production and capital goods imports. The evolution of capital goods imports in the period was strongly influenced by two phenomena: the drop in investment that characterized the whole of the 1980's from the debt crisis on, and the local capital-goods industry's production elimination after the opening experience. As a result of these two phenomena, investments in national equipment moved to investment in imported equipment, and and increase in imports of more

technologically-dynamic goods along with a drop in importance of the purchase of transport and energy-generating equipment.

- e. Expansion of energy resources. The increased local oil production resulted in decreased imports, which, in turn, diminished due to the lower local economic activity. Additionally, there was a change in the import composition, which had traditionally been of petroleum oils, and which are currently two thirds of gas as a result of the bilateral agreement with Bolivia.

7. Industrial exports

By the mid-1970's, and as a result of a technological-productive maturity of a series of production processes, Argentina's industrial sector showed growing export levels. Going contrary to the original domestic-market focus that had supported its consolidation and development, a series of labor-intensive production processes, with high added value and located at the end of the productive chain (such as in the production of automobiles, agricultural machinery, capital goods, textiles and clothing) channeled growing shares of their production into similar or lower relative development countries.

Fifteen years later, the initial scenario changed remarkably. Surprisingly enough, and in the framework of serious economic turmoil, in 1990, Argentina's exports were over US\$12 billion per year thanks to the notable dynamism of manufactured products placed abroad. It is interesting that amid a clear stagnation of production, external sales show an accumulated growth of around 7% per year and that such growth is particularly based on the dynamics that characterized the manufacturing sector (to the extent that its accumulated growth was almost 9) (Bisand and Kosacoff, 1993).

The increase in exports was not neutral in terms of composition, but – as a result of what took place in the domestic production structure -, it was characterized by notable changes. Thus, as in the case of manufactured goods associated to primary sectors, external sales of vegetable oils, fishery, paper pulp and, to a lesser degree, fruits and vegetables and dairy products, gained importance quickly. On the other hand, both meat-packing plants – which had been the basis of the role of an agricultural and stock-raising country like Argentina in the world – and sugar and mill products became less important as exports.

In turn, in the field of strictly industrial production, the notable dynamism – they grew to reach almost 4 billion dollars per year – was also accompanied by deep changes. The greater importance of widely used industrial goods – steel, aluminum, petrochemicals, etc. -, oil refined products and autoparts quickly displaced finished-goods industries associated with the metalmechanical, paper and textile production that used to control the scene in the 1970's.

In a production re-specialization process, where the export priority growingly falls upon resource-intensive activities – gas, fishing and forest resources, etc. – and with little added value and/or associated with the transnational companies' globalization processes, trade flows are redirectioned towards central markets, with placements in neighboring countries with equal or less relative development not being so important. Along with the emergence of major exporting companies – of local capital and/or transnational capital – the new export currents are supported by a wide array of factors from techno-productive accumulation resulting from the substitution model to the broadening of the economic frontiers due to the incorporation of natural resources (gas, forestation, fishing, etc.), and last but not least, transnational companies' growing globalization and redefinition processes, changes in the local regulatory framework and the anticyclical behavior of industrial exports before the deterioration of the domestic market.

V. The transformations during the Convertibility Plan

The beginning of the 1990's takes place at a time of significant political and economic changes, both nationally as regionally and internationally. The boost coming from external factors played a lead role, particularly, the remarkable increase in international credit offer for the so-called emerging countries and the higher prices of export products. However, this decade is mainly characterized by the domestic policy reforms performed. Throughout the 1990's, Argentina implemented a series of profound economic reforms whose axis was the stabilization of prices, the privatization or concession of public assets, the trade opening of many sectors of the local economy, the liberalization of a large part of goods production and the rendering of services and the renegotiation of external liabilities (Heymann, 2000).

The monetary policy was one of the areas with the most changes. In 1991, by the passing of a law, convertibility plan with a fixed exchange rate between the local currency and the US dollar (1 peso – 1 dollar) was put underway. The Charter of the Central Bank was also amended in order to adapt it to the new plan, limiting the entity's financing of the government and the granting of rediscount facilities. Also, in 1992, the national government reached an agreement with foreign creditors through which capital debt and interests in arrears with banks were replaced with secured long-term public bonds, within the framework of the so-called Brady Plan.

After the start-up of the economic program, the inflation rate showed a downward trend and began to decrease gradually. This break with the inflationary past became a crucial element for the evolution of

the economic activities, due to its importance for price-forming and assets demand. The broadening of the horizon of decisions convey an important change in capital forming. Price stabilization was accompanied by a notable increase in credit volume, both in dollars and in convertible pesos. Sooner than expected, it was noted that the credit market functioning, and more generally all contractual relations, was largely based on expectations about the continuity of the exchange regime. Thus, this behavior of economic agents determined the increase in perceived and effective costs of the convertibility regime abandonment.

Regarding the reform of the functioning and scope of the State, a law subjecting a number of public sector's companies and activities to privatization was passed. This process took place very promptly: in 1990 the phone company (ENTel) and the airline company (Aerolíneas Argentinas) went to private hands. Oil-producing areas and other oil assets followed that path (1991 and 1992), as well as the electricity and gas companies (1992), the state-owned steel company SOMISA (1992) and the oil company YPF (1993), among other operations.

The behavior of the fiscal policy throughout the 1990's is still controversial. When compared with the previous decade, fiscal management presents a notable improvement. However, the sustainability of the exchange regime demanded that the reduced deficit not be interrupted halfway through the decade, but that the efforts to increase the public sector's solvency be further increased. Initially, the effects of the aggregate product performance and the privatizations on public revenues resulted in an increased public spending that accompanied the real revaluation of the economy. As time went by, tax burden was concentrated just on a few taxes and the tax base began to be broadened. Subsequently, revenues were affected by the very structural reforms (particularly, the social security system one) and the financial crisis with epicenter in Mexico. From then on, and even more so in the recessive context initiated halfway through 1998, a period characterized by growing tension between the demand for public spending, the drop in tax collection and the attempts to solve part of the relative prices problems through the fiscal front begins.

The 1990's foreign trade policies had two pillars: trade opening and regional integration. The reduction in tariffs and non-tariff barriers to imports and the elimination of exports taxes changed incentives of production and the demand for goods. The regional integration process in Mercosur went deeper in the 1990's and along with the trade opening led to a notable increase in trade flows among member countries. Trade policies and the attitude towards the integration process were seriously affected by competitiveness problems of international tradable goods, particularly as from the Brazilian currency devaluation in early 1999.

The macroeconomic performance at the beginning of the 1990's was characterized by a remarkable increase in domestic demand, boosted by the higher local and international credit offer. The origin of this behavior is linked to the positive expectations of future revenues resulting from the change in the economic regime, encouraging increased consumption and new investment opportunities. The lower financial restriction shows not only in the comeback of bank credit, as a result of a growing monetization, but also in the boom of capital markets where debt securities and stock for significant amounts were issued. The increased aggregate demand spread throughout the different sectors of the economy, even when it is important to highlight that the high increase in the manufactured goods product was lower than the total product. The scarce impact on production expansion on employment, as a result of the negative effects of the productive restructuring, helped increase unemployment. The sudden rise in goods imports, added to a different behavior in exports, gave rise to considerable negative trade balances. Likewise, the deficit in the current account of the balance of payments began to originate some doubts regarding the sustainability of the macroeconomic scheme, although they were widely made up for by the foreign investment and the international credit operations.

In this context, in 1995, the increases in the international interest rate and Mexico's currency devaluation caused a financial crisis. This shock resulting from a retracted credit supply had an

immediate impact on the activity and employment levels, and seriously affected the financial system. It is probable that the fast overcoming of the crisis, supported by improved international prices, a higher demand from Brazil after the launch of the Plan Real and the regulatory reforms in the financial system might have helped strengthen the positive perceptions of the revenues growth and the solvency of a macroeconomic scheme that now increased exports, savings and employment, the subsequent devaluation and change of the exchange regime in its principal trading partner, the sudden drop in the prices of the products the country exports, the persistent strength of the dollar relative to other world's currencies and the public sector's continuous displacing of the private sector in domestic financing markets are the most clear examples of what took place. By the end of the 1990's, a long period dominated by recession and deflation of prices gave rise to growing tension and changed expectations of the potential growth of the economy and the public sector's solvency, leading to the last definitive collapse of the economic regime.

1. Productive strategies and business transformations in the 1990's

As an answer to a new configuration of the local competitive framework, strong business reconversion processes began to be displayed, in which both strategies and the relative weight of the different activities and economic agents and productive, technological and trade practices changed. In these dynamics, companies' different measures determined opposite results that might be put into two large groups of business behavior. On the one hand, the so-called "offensive restructurings" characterized by having reached efficiency levels comparable with the best international practices and which involve a small group of around 400 companies. Although cases may be found throughout the whole business spectrum, activities related to natural resources extraction and processing, basic good producing branches and part of the automobile complex prevail. On the other hand, the rest of the productive fabric, just about 25,000 - companies not taking into account the microcompanies -, characterized by carrying out the so-called "defensive behavior", which despite the progress made in terms of productivity relative to their own past are far removed from international technical frontiers and keep certain features of the substitution stage such as a reduced production scale or low economies of specialization (Kosacoff, 2000).

We can say that the economic stabilization process put underway in the 1990's increased the ability to notably forecast the evolution of the main macroeconomic variables and implied an unmatched advantage for the organization of productive activities. However, a new type of uncertainty emerged, which may be defined as strategic, that to do with the change in the businesses' competitive environment and with the new rules of the game that determine what companies will produce and how they will do it. Decisions about investment in specific assets, incorporation or substitution of production lines, human resources skills in the company or the technological learning path to follow take on an elusive dimension difficult to evaluate with the prevailing patterns of a semi-closed economy.

One of the central aspects of the structural transformation was the reconfiguration of the business profile relative to that of the substitution process. A general view might indicate that to the departure of the state-owned companies, and some involvement in small- and mid-sized companies, we must add the reorganization of local economic conglomerates and the leadership and sustained dynamism of transnational companies. Within the universe of productive companies, we should highlight, in the first place, the behavior of transnational companies, whose main strategies are associated with foreign direct investment (FDI) flows coming in throughout the 1990's. By the late 1980's, a recovery of FDI flows began to take place, reaching notable and growing levels in the following decade. According to official estimates, between 1990 and 2000, FDI for US\$78 billion

came into Argentina, due to which the amount of foreign capital grew to annual rates higher than 20% and went beyond 80 billion in 2000 (Kulfas *et al.*, 2002).

Foreign investment led the 1990's productive reconversion process, particularly those aspects that modernize the process and it is remarkable the high correlation between the most dynamic sectors of local production and the increase in share of foreign capital in such sectors. Even within the framework of strategies largely aimed at taking advantage of the domestic or subregional market, affiliates made investments aimed at a more efficient use of its physical and human resources and, much more selectively so, at more actively joining the corporation's international structure. It is possible to identify two stages in the behavior of FDI flows towards Argentina. Between 1990 and 1993, more than half of foreign investment income correspond to public assets privatization and concession operations. Subsequently, mergers and acquisitions of private companies acquire a key role in Argentina's foreign investments. To sum up, unlike previous periods, most of FDI funds (at least 56% of total flows between 1992 and 2000) were devoted to buying existing assets, both state-run and private. Companies' mergers and acquisitions processes in Argentina accumulates between 1990 and 1999 an amount for more than US\$55 billion, of which 88% corresponds to payments of foreign capital companies. Transnational companies' affiliates' decisive advantage over local companies lay in the control of technological aspects, in the built-up skills to operate in open economies and in the ability to finance reconversion. However, the contribution of foreign-capital companies to the generation of productive linkings, to the spread of externalities and to an active incorporation into international trade dynamic networks remained weak.

The 1990's meant a change of direction in local economic conglomerates in Argentina. The new economic conditions opened multiple business opportunities in an environment of stability and growth, but at the same time, they were faced with the ability to respond of international competitors. On the one hand, their having been part of the State allowed them, associated with foreign investors and banks, an advantageous positioning in public assets privatizations and concessions. Later on, many of these local conglomerates sold their stock to foreign investors. On the other hand, while the economic opening and deregulation meant access to international financial markets, it also significantly weakened the basis to accumulate power in the local market in an exclusively and monopoly-like way. International liquidity conditions made it easier to get into indebtedness to acquire state-owned companies and diversify investments, including investments placed abroad.

Unlike previous stages in Argentina's economic history, local conglomerates' behavior in the 1990's is highly heterogeneous and changing. The type of production, the degree of initial diversification, the relative size in comparison with that of international competitors, the demand behavior, and the stage of generational change the economic group finds itself in will decisively influence the way to meet different adjustment paths. However, the strategies followed show some common features: a tendency to specialization in a more reduced group of activities relative to the past, an expansion to other markets by means of direct investment and the concentration of productive activities in sectors with higher natural advantages or lower tradability and scarce presence in the most internationally dynamic sectors based on knowledge and technological innovation.

As remarked previously, a distinct element in conglomerates' strategic positioning is direct investment overseas, with an intensity and methodology rather different from that of the ISI stage. Most investments overseas are destined to Latin American countries, even when there are some direct investment cases in the United States, Europe and East Asia. Local economic conglomerates lead this process based on management capabilities, knowledge and management of mature technologies, access to financial resources or to the ability to operate in similar cultural environments or the knowledge of specific conditions of some nearby markets. Certain national groups, through this kind of strategy, seek to reach worldwide or region-wide leadership in segments of specific markets. For another group of companies, internationalization through direct investment is essential for their own survival and expansion in the new economic context (Kosacoff, 1999).

There is a certain agreement on the fact that Argentina's small- and mid-sized companies' prevailing features in the ISI model were the centralization of management in "an owner", little significant external insertion, prevailing defensive strategies, a wide production mix, scarce production specialization, low cooperation with other companies, little importance attached to innovation activities and low investment levels. These characteristics, which by and large prevailed throughout the 1990's, conditioned the responses that were applied to the structural reforms. Three groups of small- and medium-sized companies with their own specific characteristics can be identified: i) a minority group of companies with high competitive positioning (5% of the total number) which showed productive and trade excellence and favorable prospects of adapting to the new rules of the game; ii) a high number of small- and medium-sized companies (30%) with little competitive positioning and scarce possibilities of surviving in the 1990's scenario and iii) most of the small- and medium-sized companies, with "defensive strategic behavior" which face the challenge of reinventing themselves. In this context, the difficulty of defining an adequate productive strategy during the economic transformation process involved the whole of small- and medium-sized companies, regardless of their productive specialization. The new "economic environment" raised the companies' uncertainty as well as the quantity and quality of information they had to process. The worry about small- and medium-sized companies' situation translated into the proliferation of different government initiatives – in the areas of financing, technical assistance, information, etc.- (which, by and large, have had, due to various reasons, great difficulty in meeting their goals), in the performance and proposals of the different business chambers, and in the claims that, from the social and political spectrum, aimed at the protection and promotion of small- and medium-sized companies.

The growing tendency to embrace product technologies from overseas with standards close to the best international practices was against local adaptation efforts. This implied a narrower gap in terms of product technologies, but a significant loss in the acquisition of domestic capabilities by means of R&D activities. However, the strong incorporation of imported machinery and equipment was necessarily accompanied by organizational changes and higher investment in training. Also, the focus on doing away with a vertical production was basically supported by the incorporation of imported parts and pieces, thus reducing the possibility of establishing production networks based on local subcontracting.

Summing up, the main elements that characterized the 1990's microeconomic performance are the decreased number of productive establishments, increased trade opening (with the focus on imports), an investment process based on the acquisition of imported equipment, a more concentrated and "foreign-oriented" economy and the sudden drop in the added value coefficient. Also, there was a higher adoption of foreign state-of-the-art product technologies, an abandonment of most of local technological efforts in the generation of new products and processes, a break in the vertical organization of activities based on the substitution of local added value in favor of foreign supplies, decreased mix of production along with a higher complementation with foreign supply, growing outsourcing of activities in the service sector, a higher internationalization of companies and increased importance of regional trade agreements in business strategies. But the most salient feature in the 1990's productive organization was heterogeneity. No doubt all economic agents equally faced the challenge of moving from a "workshop stage" to a "company stage": new production strategies in which local production went hand in hand with foreign supplies and finished goods, with the purpose of making full use of the new rules of the economic game.

Between 1998-2001, the return to the extreme volatility of the environment seriously affected production and investment decisions and gave rise to growing doubts about the solvency of a big number of companies. The problems of Argentina's economy generated financial and trade turmoils. The negative consequences at a business stage have already been shown and nobody knew which the economic agents' responses before the return of high macroeconomic uncertainty were going to be.

VI. From the long-lasting recession to the convertibility collapse

By the late 1990's, the beginning of a long period of recession and deflation of prices gave rise to growing tensions and changed the expectations regarding the economy's growth potential and the public sector's solvency. Thus, a whole series of problems emerged strongly: the vulnerability of the economy to external shocks; deeper weakening of the financial system; a certain anti-competitive bias in the pricing structure; consistency problems between the spending and investment destination and their financing forms; the fiscal sustainability and its relation with a permanent fixed nominal exchange rate; the presence of endogenous forces leading to a recessive adjustment and a heterogeneous modernization of the productive organization that was insufficient to provide the economy with higher and growing productivity levels.

In this context, the crisis Argentina was going through wound up translating into a long-lasting and profound recession, a steady growth in unemployment, poverty and extreme poverty rates, and a moderate process of deflation of prices and salaries. The fiscal situation was also very delicate due to the virtual impossibility of financing the imbalance willingly. Gradually, doubts about the ability to meet the growing public debt and the sustainability of the monetary regime and the related systems of contracts became certainties. The existence of a profound political crisis, deeper social turmoils and the virtually non-existent credibility of the successive economic policies tried out on the eve of the final collapse of the regime made the scenario much worse. Under these circumstances, there was a sudden and fast decrease in banking deposits -simultaneously accompanied by a capital flight-,

which lead to the imposition of restrictions to the financial system and controls on payments destined to foreign countries. The different authorities declared a partial default on public debt and the abandonment of the currency convertibility regime and foreign-exchange parity in force since 1991. The immediate consequences were a sharp increase in prices and a break in the systems of contracts. In the exchange front, after briefly keeping the currency peg to an official rate, a floatation regime with the intervention of the Central Bank was put in force.

In the first half of 2002, there were strong turbulences: the disappearance of local and foreign credit, the impossibility of provisioning, the higher prices of tradable supplies and the operating difficulties in the payment system came together to depress goods and services demand and supply. However, the partial “pesification” of foreign-exchange denominated local banking and financial debt reduced the real value of liabilities. The drop in the activity level and the sharp depreciation of the exchange rate implied strong changes in sectors’ profitability, demand configuration and income distribution. In the framework of an intense capital flight, the real exchange rate reached levels comparable with those during the end of the hyperinflationary crisis in 1990. The balance of trade was extremely high due to the sudden drop in imports, giving rise to a considerable surplus in the current account. Investment decreased strongly, but simultaneously, savings grew. Despite the intensity of the turmoil, the peso remained the denominator of prices and the medium of exchange. Although domestic prices grew considerably, the behavior of adaptation to a persistent inflation context was not recorded.

1. The new economic and institutional context

The process associated to the abandonment of the convertibility system was marked by great turmoil, not only economic, but also social and political ones. The costs of leaving a regime without “escape mechanisms” and which turned out to be unsustainable, were in fact very high. However, the ensuing recovery was equally intense. The context and methodologies in which the economy performed as from the second half of 2002 laid the groundwork for a shift back to normal. From the point of view of the resource-allocation process, the incentives structure implicit in the new relative prices of the economy was redefined in favor of tradable goods, labor-intensive processes and natural advantages. In the external sector, while in the 1990’s, one of the basic problems was the generation of sufficient exports to sustain the dollar-denominated spending, after the devaluation, it was the domestic demand that appeared to be unusually compressed relative to exports. Nevertheless, this shift in the balance of trade originated some leeway for a notable recovery of the domestic demand without having to resort to foreign net financing and also exhibited decreased capital outflows.

The tax system operated in an emergency situation that, along with the drop in the real value of the expenditures, allowed recovering the primary surplus. In such a recovery, a very elastic response of the government’s tax revenues was recorded. A significant primary surplus took place, whose value (in proportion to GDP) was the highest in decades. Also, the government presented a proposal for the restructuring of the debt issued before 2002, on the basis of a primary surplus of the public sector of approximately 3% of GDP. By the end of the offer period in March 2005, bonds for US\$62 billion were presented, that is, 76% of the eligible amount. While the debt after the implementation of the swap (US\$123 billion) was not much lower than that in 2001, the maturity profile had been extended and the interest burden had been considerably reduced. One of the issues still to be resolved is the treatment of holdouts (almost US\$20 billion of the original value). In early 2006, the government paid off, in just one payment the debt it held with the IMF (close to US\$10 billion).

Argentina’s economic performance after the convertibility was characterized by a surprising positive performance. In macroeconomic terms, there is today a starting point which is totally

different from that we had last decade. A flexible and competitive exchange rate, a prudent fiscal policy with unrecorded results in the past 50 years and a monetary policy consistent with the macroeconomic scheme. We have been able to leave behind the convertibility without repudiating the use of the local currency and most of the foreign debt was restructured, with very beneficial results for the country in terms of lower rates, pardons and maturities. In these aspects, the history of expansions that soon result in a solvency crisis seems to have left teachings translated into more cautious attitudes and concerns about consistency.

The tendency to economic normalization allowed for the recovery of the pre-crisis activity levels and the notable creation of jobs. The current account of the balance of payments and the balance of trade show surpluses. The recomposition of the investment process was higher than expected and already reaches the record values in the 1990's. This is specially notable in agriculture, tourism, mining, construction and within the whole of small- and medium-sized companies. Also, the international context of high raw material prices – related to the expansion of China and India – and the decreased interest rates have been very favorable for Argentina in the past few years, with forecasts of remaining so in the medium term, providing the country with a window of opportunity.

Nevertheless, when we compare today's economic and social indicators with those of the 1970's we can very clearly see the enormous challenge we face in order to recover the population's welfare, equality and dignity. Among many other examples we see that GDP per inhabitant in 1974 was the same as that of 2003, which shows our stagnation; today's industrial added value per inhabitant is 20% lower than three decades ago; the unemployment rate in 1970 was 4.9 and underemployment 5.9%; the proportion of households in Greater Buenos Aires below the poverty line moved from 5% in 1974 to 42% in 2003, and below the extreme poverty line from 5% in 1988 to 20% in 2003; the difference in income of the 20% of the poorest households relative to the 20% of the wealthiest households moved from 8.7 times in 1974 to 17.1 times in 2000. One of the few economic indicators with an excellent performance was the growth in exports per inhabitant, which increased 15 times between 1970 and 2004. However, this dynamism of external sales is based on a shift back to a primary economy in the production specialization which impacted very favorably on macroeconomic accounts, but did not generate the necessary conditions for a sustainable economic development with decent jobs.

2. Industrial activities performance in 2002-2006⁴

The devaluation in early 2002 gave rise to a radical change in the economy's relative prices, generating incentives diametrically opposed to those in force during the convertibility regime; sectors' profitability changed both in absolute and relative terms, favoring tradable goods production. Since then, Argentina's economy has experienced a fast recovery, at an average annual accumulative rate of 8.2% between 2002 and 2006, recovering – by 2005 – the product levels prior to the recession and crisis.

At the level of the big sectors of the economy, the industry has led this process of reactivation, characterized by a relatively early recovery and high growth rates. Due to this tendency, the manufacturing sector has accumulated a 39.5% growth between 2002 and 2005, increasing its share in the national GDP (from 16.2% in 2002 to 17.7% in 2005) and reversing the desindustrialization process relative to the past decade. However, while it surpasses the 1998 levels, it is not the same industrial level existing then. Comparing the Economic Censuses of 1994 and 2004, there are clear signs that throughout these years sectors were dismantled and capabilities

⁴ This section is based on Porta (2007).

disappeared, a primary and disassembled structure was stressed and the control by foreign capital in most of the industrial and service sectors has been consolidated.

In addition to the reduced number of activities characterized by strong static-type comparative advantages or largely benefitted by specific industrial policies, the industry is made up today of companies that survived the double adjustment – first that of the convertibility conditions and then that of the recession – and that before the new relative prices conditions have reacted favorably. On the basis of each activity's competitive regime and its particular ability to react to sudden changes in relative prices, the manufacturing branches showed various levels of recovery, dynamism and contribution to GDP growth; nevertheless, a salient characteristic of today's industrial growth is that it has been quite widespread at sector level.

Among the most dynamic branches during the current reactivation phase prevail those that experienced the sharpest relative drop in production volumes during the crisis (textile and clothing, metalmechanic – excluding machinery –, construction materials, audio and video equipment, electric machinery and equipment and automobiles). Nevertheless, as these activities had started their downsizing already during the growth years in the 1990's (except the automobile sector), their recent performance has not been sufficient to recover their previous maximum production levels.⁵ All these activities, leaders in the industrial growth since devaluation, have faced a growing domestic and external demand and do not present strangling coming from the supply due, mostly, to their abundant idle capacity at the onset of recovery and, more towards the end of this recent period, to additional investments.

In turn, those sectors that grew the most in the 1990's and dropped less than the average between 1998 and 2002, show sustained increases in the recent period, albeit less pronounced, going beyond their historical maximum records. This relatively less dynamic performance is explained, in most cases, by the fact they are close to saturation levels of their installed capacity, or they require large projects of investment, whose start-up is not immediate. They are, generally, activities based on the use of natural resources and commodity producers (raw material, metals, basic chemicals, paper, fuel and food), consolidated throughout the opening and deregulation process and that currently show a higher relative weight in the industrial structure. Their better relative performance during the crisis period is explained, mostly, by their high export indicator; in turn, post-devaluation relative prices have been equally favorable for them.

We must point out that the convertibility hardest-hit sectors' physical production recovery level has not been accompanied in the past few years by a higher ability to capture excess production; on the contrary, the change in relative prices further stressed the pre-existing profitability asymmetries in the industrial sector. In fact, when estimates are considered at current prices, capital-intensive activities and with the greatest weight in the industrial structure are the ones that gained relative share in this last period; particularly, the production of metals, automobiles, chemical substances and products, oil and food and beverages. Instead, those labor-intensive branches with a greater focus on the domestic market, such as furniture, editing and printing, clothing, leather manufactured products and rubber and plastic products are among the sectors with decreased share in the industrial product (at constant values).

In this sense, while many sectors have totally or partially regained lost ground in a more favorable macroeconomic and incentives framework, the sectors configuration of the industry has not changed significantly. In fact, we can state that it should have been expected given the short time since the collapse of the convertibility plan; anyway, the signs shown in investment trends might confirm the lack of existence, in the medium term, of a structural change in force. The

⁵ Exceptions are editing, printing and reproduction of recordings and building material, which grew at very high rates thanks to the increased domestic demand, and radio, TV and communications equipment and units, quite favored by Tierra del Fuego's Promotional Regime.

disparities observed in expansion rates and some alterations at a sector level in the leadership of the industrial recovery have not changed the growth pattern inherited from the structure reforms and the ensuing production adjustment. Probably, the most clear exception is the oil refining activity, which stood out during the 1990's for its capacity to increase aggregate growth and for its contribution to the increase in export values, and which in early 2000 it went into a stagnation phase.

The process of job creation in the industry shows a similar sector pattern. The activities that show most job creation and incorporation of labor are those that most eliminated it between 1998 and 2000; they are, basically, labor-intensive lines and, in turn, mostly domestic-market focused. The strong recovery of the domestic demand since the second half of 2003, in the context of a relatively protectionist exchange rate before competitive imports, favored such performance. Instead, the job creation process has been comparatively less dynamic in the case of traditionally exporting sectors or those producing industrial commodities, relatively little sensitive to the domestic economic cycle and, due to this, less prone to dismissing labor during the previous crisis. In general terms, most recent industrial employment growth is due to the evolution of certain branches with an important weight in the production structure (food and beverages) and to the strong reactivation of other labor-intensive activities (textile, footwear, metalmechanic).⁶

It is important to point out that the positive employment evolution in every industrial branch is a characteristic feature of the post-devaluation growth profile, in comparison with the growth phases under the convertibility plan;⁷ in this period, increased production was associated with high increased unemployment and the average labor productivity.⁸ The prevailing competition conditions throughout the previous decade, mostly due to the trade opening and a foreign exchange relatively appreciated, forced a structural adjustment process in the productive sector and important changes in the production function at a microeconomic level, focusing on the intensification of the labor process and lower employment contents, with the subsequent reduction in staff. This adjustment process remained in force even during the recession and crisis phase, when the drop in employment volumes surpassed that recorded in production, which prolonged the positive trend in the medium productivity.

In fact, the new relative prices set as from devaluation turned labor cheaper vis à vis capital. However, labor widespread growth as from 2003 is not explained by an eventual change in the production function, rather different from that recorded in the 1990's. The massive incorporation of labor is due, mostly, to the start-up of high levels of idle capacity the productive reactivation process departs from and is based on; its origins are also the important recovery of those more labor-intensive branches. Being the industry, in general, a leading sector in job creation, the employment-product elasticity has been declining steadily since 2004, recording in 2005 and 2006 variation rates of labor incorporation lower than the economy's growth average.⁹ In turn, the average labor productivity grew in this past period: while in 2005, industrial production was 2.75% higher than that in 1998, labor requirements were 11.7% lower.¹⁰

⁶ In this regard, a CEP's estimate on the basis of the *Matriz Insumo Producto* and the Industrial Survey show that seven sectors concentrate 71% of the increase in employment as from devaluation: food and beverages (32%), machinery, construction material, textile products, hide and footwear, rubber and plastic products and metalmechanics (excluding machinery).

⁷ Initially, labor demand as production increased was covered by extending working hours and not for job creation; since late 2003, instead, new job creation has taken place.

⁸ On the basis of data from INDEC's Monthly Industrial Survey, production volume grew by 42% between 1991 and 1998, while employment dropped by 5%; the average labor productivity increased accordingly by 51%.

⁹ Based on formal employment data.

¹⁰ Data from de la INDEC's Monthly Industrial Survey.

Investment accompanied this economic and industrial reactivation process, reaching in 3rdQ, 2006 22.8%, higher than the record in early 1998. It is interesting to highlight that the investment process shows higher dynamism than in other post-crisis recovery periods in the past 25 years; we must also point out that construction component share in investment has been higher than previously, relatively displacing the incorporation of reproductive equipment. In fact, since 1998, the age of the installed park has been increasing gradually, generating obsolescence in some branches and companies; this situation turned out to be particularly serious during the crisis resulting from a net disinvesting process affecting the reproduction of the productive capacity and increased the age of the existing equipment. After a drop of about 85% between 1998 and 2002, the imports of capital goods recovered rapidly; however, those aimed at the manufacturing industry were in 2005 40% lower than the drops recorded in 1998, without, at the same time, there being a significant substitution process through local production.

At least up to 2004, Argentina's industrial growth is based, largely, on the progressive use of idle capacity. Since then, there is evidence of increased productive capacity; the indicators of use of installed capacity, in general, have remained stable since that year, while there have been strong increases in production volumes. On the basis of available data on the investments by sector,¹¹ while the industrial sector does not seem to capture a significantly higher relative proportion than in the previous decade, shows towards 2004 a growth rate of the amounts and projects analyzed higher than those of that of the rest of activities. Investment by sector in the manufacturing industry does not seem to alter the prevailing pattern in the past 10 or 15 years: the branches of production of food and beverages, automobiles and autoparts, oil and gas subproducts and chemicals continue to concentrate around 70% of total investments in this industry. Commodities and activities based on natural resources are the nucleus of Argentina's productive specialization and there are no signs of significant changes.

As from 2004, there have been a reactivation of FDI flows into the Argentine economy; since that year, FDI inflows have averaged around US\$4 billion, somewhat lower than the annual average of the 1990's (leaving aside those corresponding to the already and exhausted privatization process). Today's landscape in terms of FDI shows some qualitative changes: a higher relative share of the flows channeled into the manufacturing sector and the primary-based export activities and a higher relative share of the flows from Brazil, Chile and Mexico; instead, the strong proportion of company acquisitions has remained with no change, above the expansion or greenfield investments.

It is interesting the internationalization dynamic of companies from regional neighboring countries, particularly if it is contrasted with Argentina's companies' weak international expansion process. In turn, mirroring the change of conditions for some public services, there has been a process of repurchase of some privatized assets and some foreign investors have been replaced with local groups or holdings; very probably this move, focused on segments with little technological dynamism, has already finished its cycle. As long as the export prices, exchange rate and the internal demand growth expected remain at today's level, FDI flows will evolve accordingly. It is also probable that the purchase of national companies will still be high: among such companies there is still the "exit" strategy instead of a productive commitment.

During the period considered, the aggregate demand expanded with a dynamism higher than that of goods and services supply; the economic growth, even since the late 2002, has been accompanied by a steady increase in imports, in every category of products. This was led, initially, by the imports of supplies and intermediate goods; subsequently, the imports of capital goods and also those of consumption goods increased equally intensively. No doubt, it is interesting to note that the import ratio in this growth phase is higher than that recorded in the past decade, with such an abrupt change in relative prices in favor of local production. Different factors might be inducing this situation: the consolidation of an import platform and logistics, international companies'

¹¹ CEP, Secretaría de Industria, Comercio y Pequeña y Mediana Empresa: database on investment projects.

supplying strategies, some technological rigidity, the difficulties in recovering the dismantled technical capabilities and Brazil's positioning as a supplier might surely be among the main ones.

In some industrial branches, nevertheless, there has been an import substitution process; the CEP (Centro de Estudios para la Producción) estimates that the industrial apparatus, at an aggregate level, substituted imports by 8.6%, if compared 2005 with 1997. The greatest substitution effort seems to have been in those branches that broadened their productive capabilities between the late 1990's and today; among which stand out cellulose and paper, agrochemicals, steel, construction materials and food and beverages. Other branches, such as industrial machinery and precision instruments, substitute imports without an increase in installed capacity. Instead, other branches such as textiles, hides, household appliances and machine tools record a desubstitution process net of imports.

Now, since 2002, the trade balance of the industry has been positive, after a whole decade of deficit; this important change of trend is the result of the strong and steady import growth, whose average in 2003-2005 is almost 40% higher than that in 1996-1998. Exports have become a source of growth in Argentina's economy, accounting for more than 20% of the increase in GDP in 2005. The devaluation has no doubt improved the competitiveness-price of industrial-based manufactured goods, whose external sales have grown – like those of the energy sector, favored, in this case, by the rise in international prices – more than the total average. Instead, the new macroeconomic picture does not seem to have had, at least so far, a significant impact on the industrial exports' profile, whose composition has not varied significantly; after a relatively weaker and slower start, due to the situation of the Brazilian market, automobile exports have regained their leadership.

It is interesting to note the changes in the geographical composition of trade balances. During most of the past decade and up to 2001, the negative trade balance was due to the exchange relations between the NAFTA countries and the European Union, whose deficit was not made up for Argentina's favorable results in the Mercosur trade. Since 2002, the situation is quite the opposite: the trade surplus builds up in the relation with the Northern countries – plus the emergence of considerable positive flows with China and India – and is partially diminished by the deficit-making relation with Brazil. In part this is due to the composition of the respective flows: the upward trend of raw materials' and commodities' prices favors the results obtained in the first case; it is also due to the low growth of the Brazilian economy, which restricts its imports and encourages its exports, and to the devaluation of the peso before the real relative to the currencies of the other trading partners.

A final comment on the income distribution trends. The devaluation caused a phenomenal transfer of incomes from wage-earners and other fixed-income sectors to the rest of the economy and lay the groundwork for an extraordinary recovery of industrial companies' operating profit margins. The data available in the research done in INDEC's Encuesta Nacional a Grandes Empresas show the drop in the salary mass in the total aggregate value. This feature is still sharper in the case of the companies belonging to the industrial sector; on the other hand, such companies have been increasing its share in the profit mass generated in the group of the 500 largest companies in Argentina. It is important to point out that productivity has surpassed the industry's real salary, increasing, on average, the operating margins. Along with the strong growth recorded in the activity levels, the very high poverty levels emerging from the crisis of the convertibility and the solution applied have slowly and gradually been reduced, in favor of an increase in employment and a recovery of the real salary. But, equiparity and income distribution are still issues to be solved in the new growth regime.

VII. Towards a new industrial and technological development model

In a context where high-impact transformations in technology, production practices and organizational methods prevailing in the global competitive scenario have been taking place, as well as a total redefinition of the rules of the game of the local economy, Argentina faces challenges and opportunities whose solution will largely determine the characteristics of the development style the country will adopt in the long term. The object of this section is to provide some debate elements, with the purpose of rethinking Argentine industrialization and suggest some alternatives that might help such process to allow a wide social inclusion by means of job creation and progress made towards a more “intensive” specialization pattern in terms of skilled work, more based on domestic technological efforts and more focused on more added-value and differentiated goods production.

In the complex international scenario we can see that in developed countries (DC) companies seek more flexible and innovative strategies and organization and production forms, with the purpose of responding to the growing globalization and the changeable consumers’ preferences. To this end, it is not sufficient to incorporate modern technologies, but also, in general, it is necessary, simultaneously, to adopt new forms of organization in the research, design, management, production and marketing processes. This process of transformations is complex, it progresses unevenly and takes on specific characteristics on the basis of the sector, region and country and involves cause and effect relations and interactions still not fully understood. However, different analyses have shown that,

empirically, there is a link between the adoption of new forms of production organization, skills and human resources training, and production and competitiveness gains.

Competitiveness is still an issue to be solved in Argentina. The possibility of gaining access to growing levels of competitiveness and sustain them in the long term cannot be limited to the action of an individual economic agent. International experience points that successful cases are based on a whole set of variables that clearly show that the global functioning of the system is what allows reaching solid ground for the development of competitiveness. Thus, the “systemic” notion of competitiveness replaces the individual efforts which, while are a necessary condition to achieve this goal, must be accompanied by innumerable aspects that make up the environment of the companies (from physical infrastructure, the technological-scientific apparatus, the supplier and subcontractor network, the distribution and marketing systems to the cultural values, institutions, legal framework, etc.). Competence capabilities are the result of a collective and accumulative process in the course of time.

The techno-productive capabilities are not exclusively the technology “incorporated” into the physical equipment or manuals and patents acquired by the company, while these are the instruments with which capabilities are put in motion. Nor are they the employees’ educational skills, while openness to acquiring skills largely depends on the education and training of the staff. Nor are they, isolated, the skills and learning provided to the staff of a company, while they are the bricks of capabilities building at a micro level. They are the way in which a company combines all the above to function as an organization, with constant interaction among its members, effective flows of information and decision, and a synergy that is higher than all the individual skills and knowledge put together. It is conceptually useful to consider the development of competitiveness at the company’s level as investment in “incorporated” technology along with investment in skills, information, organizational improvements and interrelation with other companies and institutions.

These considerations are also useful a further local integration: the development of local suppliers and subcontractors. In addition to the productive benefits, these interrelations speed up the dissemination of technologies, increase specialization, further industrial flexibility and generate employment. Due to these externalities, there could be a legitimate case to promote networks of related activities, which otherwise would not be capable of coordinating their investments. This systemic notion of competitiveness is important for each of the markets in which it is considered. Therefore, it must be obtained both on export markets and in terms of potential imports.

One of the crucial aspects is associated with the fact that learning processes do not emerge automatically as a result of the passing of time. They are precisely the positive outcome of deliberate and explicit efforts focused on technology building and human resources training. This means developing a technological and productive strategy associated with investments channeled into the generation/adoption of permanent technical changes, which lead to a maturity that is not automatic or instantaneous and that requires constant and conscious efforts.

In a situation where economic problems come along with fragile institutions, it is not necessary to “go back to the market”, but to “build the market”. This means acting on the institutions of collective life and provide the skills that allow most individuals to be part in the most effective way of such life. Also, public policies or the development of competitiveness should aim at not only favoring a change in the institutional context in which companies operate, but also at specific measures that favor the development of the cooperation among the companies in order to afford the individual specialization in a context of complementarity and expansion of the market. The development of productive chains and the higher demand for employment should be the goals to meet.

In this scenario, public policies, with instruments different from those used in the past, should play a key role as catalizer of transformation processes, generating an institutional framework favorable to the development of productive and technological efforts, aiming at improving private

agents' goals and strategies coordination possibilities. The tasks of building the market, on the basis of equal opportunities, improvement of skills, development of institutions and a new analysis of the role played by the "company" in the economic system, might allow creating a new environment to strengthen Argentina's economic progress.

The Argentine economy is faced with a several challenges in order to go back to a path of economic progress with a steady growth of GDP and a more fair distribution of its fruits. Among other challenges, it must overcome structural problems in its labor market and seek equilibrium in its external sector. If we consider that Argentina's per-capita income is close to US\$5000 per year, and our aspiration is to come close to countries that double this figure, it is clear that our exit is not based on our competitiveness with low salaries, since other societies have salary scales notably lower and that such strategy does not agree either with the improvement of our population's life or with the trends in the best-performing nations. The search for more and better jobs is only possible with a better quality and wider productive base, with an upward trend in the share of knowledge- and technology innovation-based goods, with the intensive use of skill-labor and full use of our abundant natural resources.

The dissemination, adaptation and generation of scientific and technological knowledge is neither an automatic nor an individual process. It requires deliberate efforts in a complex collective and accumulative process in the course of time, in which, among others, companies, public institutions and the civil society, businessmen and workers, research institutions and universities, which make up the so-called the National Innovation System, take part in an interactive way. In the field of knowledge, markets' flaws, the existence of public assets, the faulty dissemination of information, the limited rationality, the building and strengthening of institutions are some of the conditions that determine the need for public policies in order to strengthen the innovative system.

The spending on Research and Development (R&D) performed in Argentina is not adequate to move to a productive structure more specialized in the production of differentiated goods and services, with more local added-value content and a steady growth in productivity. Argentina spends around US\$800 million per year on R&D, which accounts for just 0.4% of its GDP, which is rather far from that of Brazil and Chile, where that figure is twice as high, and even farther from developed societies that devote between 2% and 3% of its GDP to R&D, or from major transnational corporations, in which it is common to see annual investments in R&D higher than US\$5 billion. Also, our country characterizes by scarce participation of the private sector, unlike more industrialized countries. The improvements of efficiency and productivity of the economy have been based on the purchase of supplies, equipment and machinery and technology from overseas. These aspects are necessary and positive, but were accompanied by a notable decrease in endogenous efforts for the development of competitive capabilities. The growing participation of transnational companies was not associated with the establishment of R&D tasks in Argentina or with the strengthening of domestic productive linkings.

On the other hand, most researchers work in the public agencies of Science and Technology and at National Universities, with a low participation of Private Universities. In the public sector there have been some partial results in international best practices. However, it is not common full dedication, salaries paid and support infrastructure are not the most adequate, and there is not a coordination of efforts, either within the public activity or in the building of synergies with the whole of society.

Thanks to the incorporation of the new conceptual developments of the "new theory" of economic growth, this is mostly explained by the ability of the economies to generate and incorporate knowledge and technologies, by the education and training of labor, by the changes in the production organization and by the institutional quality. But recent economic literature also teaches us that the convergence among nations is not automatic and that for countries to be able to

effectively apply new technologies in order to close the productivity gaps keeping them apart, they must make endogenous efforts to develop local capabilities and strengthen institutions.

In this sense, productive policies seem to have three key axes that organize them: 1. strengthen the economy's capabilities by promoting entrepreneurship and innovation, investment in education, and the better functioning of capital markets; 2. stimulate cooperation within and between companies and institutions, in sector, region and local terms; and 3. foster competition by means of the opening of markets and transparency.

In the context of these lines of action should productive policies be inserted for the particular case of an intermediate-development country like Argentina, which has to simultaneously overcome economic and social restrictions. Some examples of how to translate these ordering axes into specific policies are the following:

Regarding the capabilities of our economy this should be done: a) encourage entrepreneurship and the creation of new companies with the purpose of building a new corporate base, providing flexibility to the productive pattern and reducing the risk of company mortality; b) stimulate the creation of non-existent capital markets by reviewing regulations of institutional funds so that they could finance higher risk investment projects, and design new incentives for financial institutions so that they seek and select entrepreneurs; c) recover accumulated stock capital and strengthen a national corporate base; d) promote measures to reach higher spillovers from FDI and attract new investments; e) a tax reform and improvement in the management and quality of public spending to encourage investment and export processes and strengthen the dissemination of public assets and f) provide fiscal incentives to local investment in R&D by the private sector, given the externalities it generates.

As regards the cooperation to compete in open markets, it is necessary to foster public policies that introduce the prospect of productive patterns. A significant part of production competitiveness is based on how the different production and marketing stages are articulated: from the basic input to the end consumer. To this end, productive networks should be generated and strengthened by means of: a) encouraging the development of supplier linkings and marketing networks; b) coordinating investments in complementary assets in the pattern; c) promoting higher differentiation of products and services, and the incorporation of improvements of quality throughout the productive chain by means of the interaction among companies, of shared information and the joint identification of productive improvements, since it is not always simple for companies to spot the benefits emerging from networks and cooperation, more so when they are focused on short-term competitiveness problems. This leads to an expansion of markets with increased productivity and the creation of jobs.

Promoting competition implies opening monopolic or oligopolic markets, transparency and deregulation where it is necessary. This means, in particular, a competition shot in privatized services, with an adaptation of their investment plans. But, additionally, productive policies should respect four basic requisites without which they lose effectiveness. The first is that they should be inserted in an economic strategy focused on the world market; second, policies should be guaranteed continuity in the course of time; third, there should be coordination and consistency with the rest of public policies; and fourth, there should be State's and civil society's institutional instances with counterweights for the application of policies so that the risk of profit capture is diminished. These are some of the challenges to be faced so that our country goes back to the growth path based on its productive potential and clears away once and for all the doubts about its economic capacity.

In general, the actions taken so far by the different countries to increase the competitiveness of their economies seek to straightforwardly attack the so-called "price factors" (capital, labor, tax costs, and foreign exchange rate). However, those elements that make it sustainable in the medium

and long term and that are key to a sustained growth such as policies favoring technological innovation, investments coordination, productive and marketing specialization, improved differentiation and quality of the production of goods and services, and the institutional infrastructure are not considered. That is, the “no price” variables of competitiveness. In this framework is that an intermediate-development country like Argentina, with economic and social restrictions to be overcome, should be inserted.

The change, however, requires a very precise orientation. We should remember that the structural reforms of the 1990's, while redefining the way of functioning of the economy and its main institutions, did not modify the spasmodic nature of the growth dynamic in the long term nor did they solve the disequilibria, long accumulated in the external, fiscal front as well as in the sector of resource allocation and use. The chaotic pulling out from the monetary and exchange regime during that decade further the disequilibria, whose social consequences show in two planes: the deterioration of income and labor conditions and the heterogeneity and break-up of the productive development. The sustainability of a long-term growth plan requires prioritizing both aspects.

Now, how to act in such a complex scenario? Initially, due to the Argentine economy's characteristics and track record, the advantages will be linked, in a higher proportion, to the availability of natural resources and the qualification of human resources, factors that still set it apart from the rest of the countries in the region. In the case of industrial activities, the strategy to follow could be summarized in two concepts: specialization and differentiation. As regards services, it seems to be desirable and feasible to stimulate the development of high value-added products, related to knowledge. Thus, it would be advisable to prioritize measures that might help rebuild the productive pattern, improve the “quality” of the external insertion, exploit opportunities and the complementarity Mercosur offers, consolidate the institutional framework of public policies and strengthen the ability to evaluate them. If today's advantages are taken advantage of and potential advantages are stimulated, there could be the adequate critical mass to begin to travel the developed road presented.

Argentina is a country with abundant natural resources. Additionally, in the past years important progress has been made, not only in the agricultural sector, but also in the energy, forest, mining and fishery one. This type of resources increases a country's wealth and favors potential capabilities of economic progress, but does not guarantee a sustained growth. Argentina's present export pattern reflects the degree of competence reached in production based on such resources and the manufacturing of basic input (aluminum, petrochemicals and steel-making). However, it also shows us the still undeveloped potential. The possibility of using natural resources and basic input in higher added-value production chains, moving to the realm of differentiated goods, is an alternative that might overcome some difficulties. This progress can only be made by means of a strong articulation between the primary base and the support technical services provided to production, marketing, distribution, logistics, transport and industry.

Focusing on the pending tasks does not mean being unaware of the innovations agriculture has incorporated in the past years. In fact, throughout the 1990's, in a framework of expansion of the available supply of technologies and techno-productive transformations, this sector experimented, in our country, an unprecedented process of modernization and growth, which further its internationalization. Then it moved to a more intensive agriculture, with higher use of fitosanitarios products, the massive use of fertilization and the adoption of certain techniques such as direct sowing, which, overall, allowed for a notable increase in productivity and yields. The introduction and quick spread of transgenic soybean seeds as from the mid 1990's made possible a significant cost reduction and the expansion of the cultivo throughout the country. Thus, shortly after the launch in their home countries, international-class technologies in supplies and machinery were incorporated. Simultaneously, the agricultural frontier was broadened and the industry's structure and the production organization were modified.

To develop new competitive advantages, Argentina should adopt a clear strategy. The country has an enormous potential in such diverse areas as biotechnology, software, fine chemicals, scientific instruments, telemedicine, cultural goods production, advertising, receptive tourism, among others. Without playing down the positive impact the abandonment of the convertibility plan had on competitiveness-price, a significant growth in exports not based on natural advantages depends, basically, on a series of factors maturing in longer term. On the other hand, the steady progress of an import substitution process requires available supply and, especially, widespread technological capabilities and a solid productive pattern. In general, these factors were particularly overlooked in the productive and social reconversion model prevailing throughout the 1990's, and still more attacked during the long recession in the past years and the events that signalled the break and abandonment of the convertibility plan.

The international scenario shows the growing importance attached to knowledge networks in the development of dynamic competitive advantages. In the past years, while a new information- and knowledge-intensive paradigm was consolidated, it was further the debate on the competitiveness of the agents that act in an interrelated manner, as opposed to those acting individually. In this sense, the review of recent works confirm the complexity the development of these networks involves, partly due to the nature less and less public of the knowledge and learning process that agents carry out. The new networks characterize by an important circulation of specific information and knowledge, not only among those making part of it, but essentially with companies and institutions not belonging to them.

In Argentina, this discussion has important implications. Throughout the 1990's, the trend towards specialization of the productive structure in commodities and in goods based on natural resources, diminishing the weight of knowledge-intensive products. This process of relative primarization, along with the insufficient transformation of the institutional system, the disconnection of the technological policy relative to the demand of the agents and the weakness of the local systems explain the limited development of Argentina's knowledge networks. From a broader perspective, the pronounced distance in relation with the communities leading the technical change and with dynamic competitive advantages on the international scene is a serious restriction to diversify the specialization pattern and to generate a sustainable growth path tending to diminish heterogeneities and inequity levels that prevail today.

Obviously, the weakening or break of the productive chains limits the development of learning processes, the demand for skilled human resources and the effectiveness of the technological policy. In Argentina, the asymmetry between the dynamic of the companies of different size and the growing supply of parts, raw materials and subassemblies imported by companies of bigger size have limited productive chains and the development of the learning process in network. This affected, especially, companies of smaller size and large companies that are not part of international networks. In this framework of "weak" connections, it is not surprising that knowledge-intensive networks have limited space in the productive structure.

Also, it is interesting the fact that productive agents in Argentina have changed. The State as producer has disappeared, the number of national companies has been reduced – both large companies and small- and medium-sized ones – and foreign capital has notably increased its presence in Argentine production. Transnational companies have increased their presence, first through privatizations, then due to the search of natural resources, then in the banking concentration and finally in a notable acquisition process –where around 800 positions of national companies were sold-. The foreign capital is neither good nor bad in itself, but it will depend on it will do in terms of economic development. The rules of the game established generated a lot of efficiency of natural resources, but basically when we speak of the tradable sector, they were more focused on profit seeking in order to serve a domestic market, not through the generation of added value or technological innovations, but basically through assembling processes or just import of products.

The solution is to improve the “quality” of the participation of foreign capital with the development of global products and strengthen the business base of large national companies and small- and medium-sized ones, which might boost economies of scale and specialization to recover territorial spaces and strengthen productive patterns. The development of new companies is essential to recreating the productive apparatus.

The task of building the market – putting opportunities on an equal footing, improving capabilities, developing institutions and rethinking the role of the “company” – means creating a new environment to strengthen the economic progress, improving income distribution and generating decent jobs, in which the competition factor is quality labor and not low salaries. Public policies should turn to instruments different from those used in the past and act as catalyzers of transformation processes, respecting some basic requisites without which they would lose effectiveness. The first is to adopt an economic strategy focused on entering the world market; the second, guarantee the continuity of programs in the course of time; the third, achieve coordination and consistency with the rest of public policies; and the fourth, create institutional instances of the State and the civil society that operate as counterweights to reduce the risk of profit capture.

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